Z 249
.H7

1860

R. HOE & CO.

Manufacturers of

Single and Double Cylinder and Type Revolving

Printing Machines

Power Presses, Adams' Patent,

Washington and Smith Hand Presses,

Self-Inking Machines, &c.

EVERY ARTICLE CONNECTED WITH THE ARTS OF LETTER-PRESS, COPPER-PLATE AND LITHOGRAPHIC PRINTING, AND BOOKBINDING, ALWAYS ON HAND, OR FURNISHED ON SHORT NOTICE.

Cast-Steel Saws,

Steam Engines, Machinery, Iron and Brass Castings, &c. &c.

LIBRARY OF CONGRESS CITY OF WASHINGTON

New-York:

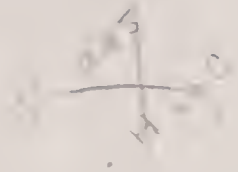
29 & 31 Gold Street, and on Broome, Columbia and Sheriff Streets.

AND ON FOUNDRY STREET, BOSTON, MASS.

FRANCIS HART & CO., PRINTERS, N.Y.

Deposited in Clerks Office Southern District of New York June 5. 1860.

Z
.H7
1854



Printing Presses, Machine and Saw Manufactory,

New York, May, 1866.

To Printers, Type-Founders, Publishers and Binders.

Gentlemen:

With a list of the prices of articles furnished by us for Printers and Bookbinders, we also present cuts and descriptions of some of our principal machines, all of which are made under our own immediate supervision, from the best materials, by experienced workmen, aided by machinery of the newest construction.

We keep constantly on hand a variety of our Presses and other materials, and furnish at the lowest prices, every article used in a printing office, including Types from the different Foundries, and Wood Types.

The character of our Presses and other articles being already well known, we need but to assure the profession that it will be our constant aim to maintain their reputation, and to introduce such further new machinery as may be required by the increasing necessities of the business.

We take pleasure in informing our friends that we have purchased of Isaac Adams, Esq., of Boston, his entire patent right to in the "Adams Printing Presses," and also his interest in all other machinery heretofore manufactured by him. The business as hitherto conducted by him, will be carried on by us at the old premises in FOUNDRY STREET, SOUTH BOSTON.

The well established reputation of the Adams machines will be sustained in our hands, and improvements introduced to render them still more worthy of your favor. With arrangements now in progress we trust to be able to execute orders with increased dispatch.

Orders or communications relative to this branch of our business, may be addressed to us at the manufactory, Foundry Street, South Boston, or to our principal office, 29 & 31 GOLD STREET, NEW-YORK.

R. Hoe & Co.

FRANCIS HART & CO. PRINTERS,
63 Cortlandt Street, New-York.

ROBIN BOND, Delineator.

Entered according to Act of Congress, in the year 1869, by R. Hoe & Co., in the Clerk's Office of the District Court of the United States, for the Southern District of New-York.

R. HOE & CO'S

PRICE LIST OF PRINTING MATERIALS,

ETC. ETC.

Letter-press Department.

PRINTING MACHINES.

Type-Revolving Fast Printing Machine (see pages 26, 27, 28, 29, 30) .....
Double and Single Cylinder Printing Machines (see pages 31, 32, 33, 34).....
Type-Revolving Rotary Book-Perfecting Press (see page 33) .....
Single Large Cylinder Printing Machine (see pages 39, 40) .....
New Four Roller Book Printing Machine (see pages 48, 49) .....
New Color Printing Machine (see page 50) ..
New Single Large Cylinder Hand-Printing Machine (see page 46) .....
Patent Railroad Ticket Machine (see page 51)
Bed and Platen Power Press (see pages 52, 53)
Bed and Platen Job Printing Press (page 53)
Patent Machine Card Press (see page 59)...
Patent Washington Printing Press (page 60)
Improved Washington Press (see page 61)...
Patent Smith Printing Press (see page 62)..
Stansbury Hand Press (see page 63) .....
Hand Lever Printing Press (see page 64)....
Ready Proof Presses (see pages 65, 66) .....

INKING MACHINES, &c.

Steam Inking Machine for Hand Press (p. 67)	
Folio Post	$150.00
Medium	165.00
Super Royal	180.00
Imperial	200.00
New Patent Self-Inking Machine to work by the action of the Press (see cut, page 63)..	
Foolscap	85.00
Medium	95.00
Super Royal	105.00
Imperial, Nos. 1 & 2	115.00
" Nos. 3, 4 & 5	130.00
Improved Inking Apparatus, with vibrating cylinder, railway and carriage, to work by hand (see cut, page 69) ..	
Foolscap, with one ink roller	32.50
" with two ink rollers	39.00
Medium, with one ink roller	35.00
" with two ink rollers	42.00
Super Royal, with one ink roller	37.50
" with two ink rollers	44.50
Imperial, Nos. 1, 2, 3 and 4, with one ink roller	49.00
Imperial, Nos. 1, 2, 3 and 4, with two ink rollers	17.00
Imperial, Nos. 5 and 6, with one ink roller	45.00
Imperial, Nos. 5 and 6, with two ink rollers	52.00
Distributors, with stand and frame, complete:	
Medium	20.00

INKING IMPLEMENTS, &c.

Distributors, with stand and frame complete:	
Super Royal	$22.50
Imperial, Nos. 1, 2, 3 and 4	25.00
" Nos. 5 and 6	30.00
Buckskin Rollers, complete:	
Medium	28.00
Super Royal	30.00
Imperial	35.00
Ink Rollers:	
6 and 8 inch stock, frame and handle	1.50
10 " " " "	1.75
12 " " " "	2.00
14 " " " two handles	2.25
16 " " " " "	2.50
18 " " " " "	2.75
Medium " " " "	4.00
Super Royal " " " "	4.50
Foolscap " " " "	3.00
Imperial, No. 1 " " " "	5.00
" " 2 " " " "	5.25
" " 3 " " " "	5.50
" " 4 " " " "	6.00
" " 5 " " " "	6.50
" " 6 " " " "	7.00
Roller Skin and Lining, sewed	3.75
Balls, large size, made up.....per pair	7.50
" middle " " " ..... "	6.00
" small " " " ..... "	5.00
Ball Skin and Lining	2.25
Ink Table, foolscap	7.50
" Block	1.00
" Slice	.75
" Brayer	.25
Glue, for rollers.....per lb.	.28
Tin Kettles, for composition, per set, from	4.50
Copper Kettles, " " "	12.00
" " " to work by steam	60.00

ROLLER MOULDS,

O" Cast Iron, accurately finished, finely polished, and furnished with bungs and centers, as follows:

Foolscap Hand Press requires 30 in. long.....	$12.00
Medium " " 34 "	13.60
Super Royal " " 36 "	14.40
Imperial, No. 1 " " 38 "	15.20
" No. 2 " " 40 "	16.00
" No. 3 " " 42 "	16.80
" No. 4 " " 44 "	17.60
" No. 5 " " 46 "	18.40
" No. 6 " " 48 "	19.20
Mammoth " " 50 "	20.00
Cylinder Press, No. 2 " 52 "	20.80
" " No. 3 " 56 "	22.40
" " No. 4 " 60 "	24.00
" " No. 5 " 63 "	25.20

STEREOTYPE BLOCKS.

4to,	4	blocks ..	$10.00	with	rule	borders..	$20.00
8vo,	8	" ..	14.00	"	"	" ..	28.00
12mo,	12	" ..	15.00	"	"	" ..	30.00
18mo,	18	" ..	18.50	"	"	" ..	37.00
24mo,	24	" ..	22.00	"	"	" ..	44.00
32mo,	32	" ..	25.00	"	"	" ..	50.00
48mo,	48	" ..	30.00	"	"	" ..	60.00

Blocks in sections, to work with cuts, to order.
Blocks of iron and brass, to order.

MISCELLANEOUS.

Parchments, ...from	$1.25
Blankets, cloth, very fine, per yard, ...from	3.50
" vulcanized india-rubber, per yard.	5.25
Gut Band, ⅜ inch diameter, 21 feet long....	6.00
Tape, ½ inch wide, per yard.....	.04
" ¾ " " "	.05
" 1⅛ " " "	.06
Bank and Horse, ...from	5.50
Rounce Straps, per set.....	1.25
Sheepsfoot Hammer.....	1.25
Screw-driver.....	.20
Press Wrench.....	1.25
Screw "	1.50
Tympan "	.75
Points with springs, per pair.....	.50
Points without springs, per pair.....	.30
Tympan Bolt and Nut.....	.38

PRINTING INKS, &c.

PARSONS, FLETCHER & Co's FINE ENGLISH INKS, in 1, 2, 4 and 5 lb. cans, as follows:

Black and Colored, No. 1.....per lb.	$2.25	
" " No. 2..... "	1.75	
" " No. 3,..... "	1.25	
" " No. 4..... "	.60	
Carmine, in 4 oz. cans.....per oz.	1.75	

AMERICAN INKS:

News.....	20
" Extra.....	25
Fine Book.....50c. to	60
Extra Fine Book.....65c. to	75
Fine Ink.....$1.00 to	1.25
Red and Brown.....from 50c. to	3.00
Blue, Green, and Yellow.....50c. to	2.50
Ultramarine.....1.50 to	3.00
Lake.....3.00 to	10.00
Gold Size.....per lb.	4.00
Varnish..... "	.50
Ultramarine Blue Powders.....per lb. 1.00 to	1.50
Bronze Powders, all colors.....per oz. 75c. to	1.50
Stone and Muller.....	7.50
Ink Mills.....from	25.00
Copperplate Ink.	
Lithographic Ink.	

Compositors' Department.

IMPOSING STONES.

(ITALIAN MARBLE), *with Table and Drawers:*

	Single.	Double.
Foolscap.....18×23	$16.00	18×46 $22.50
Medium.....22×28	18.00	22×56 25.00
Super Royal.....26×31	21.00	26×62 30.00
Imperial, No. 1...24×33	21.00	24×66 30.00
" " 2...25×36	22.00	25×72 35.00
" " 3...26×38	24.00	26×76 40.00
" " 1...27×40	26.00	27×80 45.00
" " 5...28×42	30.00	28×84 50.00
" " 6...29×45	35.00	29×90 55.00
Mammoth.....38×47	42.50	

CAST IRON IMPOSING BEDS.

With Table and Drawers:

	Single.	Double.
Foolscap.....18×23	$20.00	18×46 $33.50
Medium.....22×28	23.00	22×56 38.50
Super Royal. ...26×31	23.00	26×62 47.00
Imperial, No. 1...24×33	27.50	24×66 45.00
" " 2...25×36	31.50	25×72 52.50
" " 3...26×38	35.00	26×76 58.00
" " 4...27×40	37.50	27×80 62.50
" " 5...28×42	40.00	28×84 67.00
" " 6...29×45	45.00	29×90 75.00
Mammoth.....38×47	60.00	38×94 100.00

LETTER BOARDS.

Demy.....17×22	$ .50
Medium.....19×24	.75
Royal.....23×27	1.00
Super Royal.....24×30	1.25
Imperial.....27×36	1.50
Double Medium.....28×40	1.75

TYPE CASES.

Best quality, seasoned, per pair.....	$2.00
" ⅔ size, "	1.75
Job, each.....	1.13
Half, each.....	.75
Triple, each.....	1.13

TYPE CASES.—*Continued*

Music.....	1.13
Greek.....$2.50 to	4.00
Rule.....	1.50

Blank, for Wood Type, to order.

CABINETS.

(See cut, page 91.)

With 6 pairs two-thirds size Cases	$15.00
" 8 " " " "	20.00
" 10 " " " "	26.00
" 10 " full size " "	30.00
" 5 " half cases " "	7.00
" 10 " " " "	15.00
" 15 " " " "	20.00

CASE STANDS.

Single.....	$4.00
Double, without racks.....	4.50
" with "	5.50
Cast Iron, single, (see cut, page 90),.....	3.00
" double, without racks.....	12.00
" " with "	15.00

CHASES.

WROUGHT IRON, WITH SHIFTING BARS.

	Size over all.	Per pair.
Foolscap.....17¼×20		$10.00
Demy.....20 ×25		12.00
Medium.....22⅜×23¼		13.00
Super Royal.....25¾×31¼		14.00
Imperial.....24½×33¾		16.00
Double Medium.....27½×20¼		18.00
Double Super Royal.....32½×44½		19.00
Imperial, No. 1 News.....24½×33¾		12.00
" " 2 " .....25½×35¾		13.00
" " 3 " .....26¼×33¼		15.00
" " 4 " .....27¼×40¼		15.00
" " 5 " .....28¼×42¼		16.00
" " 6 " .....29¼×44¼		16.00

CHASES.—*Continued.*

HALF CHASES—WROUGHT IRON.

	Size inside.	each.
Imperial, No. 1	15 ×21½	$4.50
" " 2	16 ×23½	4.50
" " 3	17¼×24	5.00
" " 4	18⅜×25	5.00
" " 5	19¼×26	5.00
" " 6	20¼×27	6.00
Broadside, Job	19 ×24	3.50

CAST-IRON CHASES.

Card	4 × 5	$ .32
"	4¼× 6¼	.37
"	5 × 7	.42
Billhead	6 × 8	.49
"	8 ×10	.63
Job	9 ×12	.74
"	10 ×14	.84
"	14 ×17	1.09
"	18 ×24	1.47
Programme	5 ×16½	.77
"	8 ×23½	1.10

Other sizes made to order.
Electrotype Chases made to order.

FURNITURE.

Cherry, all sizes, smaller than 2 line Pica, per yard	$ .04
Cherry, 2 to 5 line Pica, per yard	.05
" 5 to 12 " "	.06
" Side Stick "	.06
Pine, all sizes, smaller than 2 line Pica per yard	.02
Pine, 2 line Pica and upwards, per yard	.03

GALLEYS.

Common	5 ×15	$ .25
"	5½×18	.38
"	6 ×20	.50
"	7 ×22	.63
"	8 ×24	.75

GALLEYS.—*Continued.*

Octavo	Slice	6 ×10	inside	1.25
Quarto	"	8¾×13	"	1.50
Medium	"	10 ×16	"	1.75
Royal	"	12 ×18	"	1.88
Super Royal	"	14 ×21	"	2.00
Imperial	"	15 ×22	"	2.25
Republican	"	18 ×25	"	3.00
Proof, single column, brass bottom				2.25
" double "		" "	"	2.75
" single "		" "	" and lined.	3.25
" double "		" "	"	3.75
" single "		all brass		5.00
" double "		"		6.00

MISCELLANEOUS.

Composing Sticks, 6 and 8 inches	$1.00
" " for every additional inch	.12
Steel Composing Rule	.25
Mahogany Job Stick, 20 inches	1.50
Shooting Stick, brass	1.00
" " iron	.75
" " hickory	.05
Mallet, hickory	.25
" " iron-bound	1.00
Planer	.25
" covered with cloth	.50
Quoins, hickory, per 100	.50
" boxwood, "	.75
Saw and Wooden Miter Box	1.50
Saw and Iron Miter Box	5.00
Shears, per pair	1.00
Lead-Cutter	3.00
Improved Brass Rule and Lead Cutter	5.00
Ditto double lever (see cut, page 92)	10 00
Mitering Machine (see cut, page 92)	12.00
Candlesticks, per dozen	1.50
Snuffers, per pair	.20
Bellows	.50
Bodkins	.12
" spring	.50
Proof Brush	1.00
Cord, per ball	.25

Warehouse Department.

STANDING PRESSES.

Hydrostatic Presses (see cut, on page 70) from	$400
Steam Pumps for do. (see cuts on pages 71 and 72) from	350
Improved Geered Standing Press (see cut on page 73) from	350
Improved Iron Standing Press (see cut on page 74) from	250
Improved Screw Standing Press (see cut on page 75) from	100

PRESSING BOARDS.

Demy	17×22	$ .75
Medium	19×24	.88
Royal	23×27	1.13

PRESSING BOARDS—*Continued.*

Super Royal	24×30	$1.25
Imperial	27×36	1.75
Double Medium	28×40	2.00
Sheet Iron	from	2.00
Glazed Paper, per gross,	from	10.00
Improved Paper Cutting Machine (see cut, p. 86)		40.00
Card Cutter, with 6 inch shears, (see cut, p. 88)		10.00
" " " 7 " " "		11.00
" " " 8 " " "		12.00
" " " 10 " " "		15.00
" " " 12 " " "		17.00
" " " 14 " " "		20.00
Peel		.75
Drying Poles, per ft.		.03
Iron Bar for Standing Press, per lb.		.12

Wetting Department.

LYE AND WETTING TROUGHS.

Medium	$ 10.50
Super Royal	11.00
Imperial	13.00
Double Medium	15.00

[If lined with Lead, extra.]

LYE BRUSH ..... .75

WETTING BOARDS, &c.

Medium	19×24	$ .75
Royal	23×27	1.00
Super Royal	24×30	1.25
Imperial	27×36	1.50
Double Medium	28×40	1.75

PICK BRUSH ..... .25

Bookbinders' Department.

Ruling Machine (see cut, page 81)	$150.00
Embossing and Smashing Presses (see cut, page 82) from	400.00
Book Rolling Machine (see cut, page 84)	250.00
Small Embossing, Stamping and Gilding Press (see cut, page 83)	125.00
Patent Book and Paper Trimming Machine (see cut, page 85)	600.00
Improved Paper Cutting Machine (see cut, page 86)	40.00
Shears and Table, for cutting Binders' Board (see cut, pages 87, 88) from	35.00
Piercing Machine for Pamphlets (see cut, page 89)	35.00
Squaring Shears, per inch	1.00
Finishing Press	2.00
Cutting Press and Plow	9.00
Knife for Plow	$ .50
Pin for Do	.50
Backing Hammer	.75
Compasses	.50
Plow and four boards for squaring paper	30.00
Screw for do., with iron point and nut	3.00
Sewing Bench	1.75
Polisher, cast steel	3.00
Agate Burnisher	1.50
Lettering Palettes	3.50
Gold Cushion, with Drawer	from 3.50 to 6.00
Finishing Stand to attach to table	3.00
" " larger size for blank work	5.00
Hickok's Ruling Pens	
Glue	
Gold Leaf	
Varnish	
Twine	
Thread	
Binders' Muslin	
Marbled Paper	$
Binders' Boards	
Glue Pot	
Hand Shears	.75
Paring Knife and Folder	.25
Backing Boards, per pair	
" " per inch	.12
Cutting Board....per foot	.03
Beating Hammer	2.00
Pressing Boards...6×10½	.25
" " ...8×10½	.31
" " ..10×13	.38
" " ..10×16	.50
" " ..13×20	.63
" " ..17×22	.75
" " ..20×24	.88
" " ..24×38	1.25
" " ..26×40	2.25
Brass Bound Boards, for pressing Muslin Work, with a case to hold them,	35.00

[These Boards are made in the most superior manner, bound with Brass or Steel. The top and bottom board is flush on one side.]

Electrotype Department.

Presses for Moulding, from	$175.00
Hydraulic Press for do. (see cut, page 70)	400.00
Black-Leading Machine (patent, see cut page 97)	275.00
Battery (patent, see cut, page 93), from	25.00
Backing Pan (patent, see cut, page 99)	$ 75.00
Moulding Pan (see cut, page 99)	14.00
Metal Pot for Backing up	25.00
Tinning Pot	7.00
Building Iron	2.00
Pump and Hose	$ 12.00
Bellows	5.00
Precipitating Trough	25.00
Shaving Machine (see cut, page 79)	100.00
Shoot Board and 2 planes (see cuts, page 94)	18.00

Miscellaneous.

Copperplate Presses, (see cut, pp. 76, 77) from	$90.00
Lithographic Presses, (see cut, page 78) from	125.00
Stereotype Shaving Machine, one head	100.00
Stereotype Shoot Board, with Bevel Plane and Jointer	18.00
Transfer Presses	from 250.00
Fly Presses	" 75.00
Cotton, Wool or Tobacco Presses	" 250.00
Roller Embossing Machines	" 100.00
Calendering "	" 350.00
Veneer Saw Mills "	" 200.00
Saw Mandrels	" 12.00
Wrought Iron Screws and Brass Boxes, per lb.	.25
Improved Steam Engines and Boilers for machine presses, (see cut page 80)	from $1000.00
Gearing, Screws, &c., cut to order	
Machine Leather Banding, all sizes	
Cast Iron Pulleys from turned iron patterns	
Shafting made and put up to order	
Cooking and Drying Apparatus for public institutions	
Improved Fan Blowers	450.00
Carpet Measurer	7.50
" Winder	22.50
" Unwinder	5.50

Prices of Printing Types.

The following are the Prices of Printing Types when sold at six months' credit, for approved paper. A liberal discount made for cash. Shipments by way of the Atlantic will be insured, and the premium charged in the bill. Old type received at current rates, in exchange for new.

	Roman, Italic and German.	Antique, Condensed, Title, Borders &c.	Shaded, Ornamented, Script, &c.		Roman, Italic and German.	Antique, Condensed, Title, Borders, &c	Shaded, Ornamented, Script, &c.
12 line Pica....per lb.	$ .22	$ .22	$ .34	Dbl. Small Pica.per lb.	$ .32	$ .42	$ .72
11 " " .... "	.22	.22	.34	Paragon ..... "	.32	.44	.72
10 " " .... "	.22	.22	.34	Great Primer... "	.32	.44	.76
9 " " .... "	.22	.22	.36	Columbian ..... "	.32	.44	.80
8 " " .... "	.24	.24	.36	English..... "	.32	.48	.84
7 " " .... "	.26	.26	.36	Pica..... "	.32	.52	.90
6 " " .... "	.28	.28	.40	Small Pica..... "	.34	.56	.95
5 " " .... "	.30	.30	.44	Long Primer.... "	.36	.60	1.00
4 " " .... "	.30	.32	.48	Bourgeois ..... "	.40	.66	1.08
Canon..... "	.32	.34	.52	Brevier..... "	.44	.74	1.20
Meridian ..... "	.32	.36	.56	Minion..... "	.48	.84	1.32
Double Paragon. "	.32	.38	.60	Nonpareil..... "	.58	1.00	1.50
Dbl. Grt. Primer "	.32	.38	.64	Agate ..... "	.72	1.20	1.80
Dbl. Columbian "	.32	.40	.68	Pearl..... "	1.08	1.60	2.20
Double English. "	.32	.42	.68	Diamond ..... "	1.60		
Double Pica..... "	.32	.42	.68				

SUPERIORS.

Nonpareil	per lb.	$1.50
Minion		1.32
Brevier		1.20
Bourgeois		1.12
Long Primer		1.00
Small Pica		.95
Pica		.90

SIGNS.

Nonpareil	per lb.	$1.00
Minion		.84
Brevier		.74
Bourgeois		.66
Long Primer		.60
Small Pica		.56
Pica		.52

PIECE FRACTIONS.

Bourgeois	per lb.	$3.00
Long Primer		2.20
Small Pica		1.80
Pica		1.50

LEADS.

Six to Pica and thicker	per lb.	$ .27
Seven to Pica		.32
Eight to Pica		.40
Nine to Pica		.52
Ten to Pica		.70

MISCELLANEOUS.

Flourishes	per lb.	$1.00
Pearl Check		.80
Space Rules		1.20
Slugs		.27
Quotations		.27

R. Hoe & Co's Estimates for Offices of various kinds.

For a Daily Paper the principal Fonts should be increased from 30 to 50 per cent.

NEWSPAPER 24 BY 36 INCHES.

1 Imperial No. 2 Washington Press	$240.00
1 set Imperial No. 2 Rollers, complete	25.00
1 Imperial No. 2 Roller Mould, cast iron	16.00
1 Dbl. Imperial No. 2 Imposing Stone and Frame	35.00
2 Imperial No. 2 Half Chases, at $4.50	9.00
4 Single Brass Bottom Galleys, at $2.25	9.00
6 Common Galleys, say	3.75
4 Six-inch Composing Sticks, at $1.00	4.00
3 Double Stands with Racks, at $5.50	16.50
15 Pair Cases, at $2.00	30.00
3 Job Cases, at $1.13	3.39
100 Yards Furniture	5.00
Mallet, Planer, Shooting Stick and Quoins, about	3.50
1 Lye Brush	.75
1 Proof Brush	1.00
Saw and Miter Box	1.75
25 lbs. News Ink, at 25 cts	6.25
100 Advertising Rules, at 5 cts	$ 5.00
50 Single Dash Rules, at 6 cts	3.00
50 Brass Dashes, at 10 cts	5.00
10 Double Cross Rules, at 8 cts	.80
10 Parallel Rules, at 8 cts	.80
20 Column Rules, at 68 cts	13.60
Head Rules, about	3.00
300 lbs. Long Primer, at 36 cts	108.00
250 lbs. Brevier, at 44 cts	110.00
56 lbs. Nonpareil, [if wanted] at 58 cts	32.48
Display Type for reading matter, about	15.00
" " for Advertisements, about	15.00
20 lbs. Leads at 27 cts	5.40
Head for Paper	from $2.00 to 5.00
Cuts or Ornaments, about	8.00
Boxing and Carting, about	14.00
Total	$753.47

NEWSPAPER 26 BY 40 INCHES.

1 Imperial No. 4 Washington Press	$260.00
1 Set Imperial No. 4 Rollers, complete	25.00
1 Imperial No. 4 Roller Mould, cast iron	17.00
1 Dbl. Imperial No. 4 Imposing Stone and Frame	45.00
2 Imperial No. 4 Half Chases, at $5.00	10.00
5 Single Brass Bottom Proof Galleys	11.25
6 Common Galleys, at 75 cts	4.50
6 Eight-inch Composing Sticks, at $1.00	6.00
4 Double Stands with Racks, at $5.50	22.00
20 Pair Cases, at $2.00	40.00
4 Job Cases, at $1.13	4.50
100 Yards Furniture	5.00
Mallet, Planer, Shooting Stick and Quoins, about	3.50
1 Lye Brush	.75
1 Proof Brush	1.00
Saw and Miter Box	1.75
150 Advertising Rules, at 5 cts	7.50
75 Single Dash Rules, at 6 cts	$ 4.50
75 Brass Dashes, at 10 cts	7.50
35 lbs. News Ink, at 25 cts	8.75
12 Double Cross Rules, at 8 cts	.96
12 Parallel Rules, at 8 cts	.96
24 Column Rules, at 68 cts	16.32
Head Rules, about	3.50
400 lbs. Long Primer, at 36 cts	144.00
325 lbs. Brevier, at 44 cts	143.00
56 lbs. Nonpareil, [if wanted] at 58 cts	32.48
Display Type for reading matter, about	20.00
" " for Advertisements, about	20.00
30 lbs. Leads, at 27 cts	8.10
Head for Paper	from $2.00 to 5.00
Ornaments, about	10.00
Boxing and Carting, about	15.00
Total	$904.82

NEWSPAPER 29 BY 44 INCHES.

1 Imperial No. 6 Washington Press	$290.00
1 Set Imperial No. 6 Rollers, complete	30.00
1 Imperial No. 6 Roller Mould, cast iron	19.20
1 Dbl. Imperial No. 6 Imposing Stone and Frame	55.00
2 Imperial No. 6 Half Chases, at $6.00	12.00
6 Single Brass Bottom Proof Galleys, at $2.25	13.50
6 Common Galleys, at 75 cts	4.50
6 Eight-inch Composing Sticks, at $1.00	6.00
4 Double Stands with Racks, at $5.50	22.00
25 Pair Cases, at $2.00	$ 50.00
4 Job Cases, at $1.13	4.50
100 Yards Furniture	5.00
Mallet, Planer, Shooting Stick and Quoins, about	4.00
1 Lye Brush	.75
1 Proof Brush	1.00
Saw and Miter Box	1.75
50 lbs. News Ink, at 25 cts	12.50
250 Advertising Rules, at 5 cts	12.50
100 Single Dash Rules, at 6 cts	6.00

NEWSPAPER 29 BY 44 INCHES.—*Continued.*

50 Brass Dashes, at 10 cts.	$5.00
20 Double Cross Rules, at 8 cts.	1.60
20 Parallel Rules, at 8 cts.	1.60
28 Column Rules, at 68 cts.	19.04
Head Rules, about	5.00
500 lbs. Long Primer, at 36 cts.	180.00
400 lbs. Brevier, at 44 cts.	176.00
56 lbs. Nonpareil, [if wanted] at 58 cts.	32.48
Display Type for reading matter, about	$25.00
" " for Advertisements, about	25.00
50 lbs. Leads, at 27 cts.	13.50
Head for Paper, from	$2.00 to 5.00
Ornaments, about	10.00
Boxing and Carting, about	16.00
Total	$1065.42

ESTIMATE FOR SMALL JOB OFFICE.

1 Super Royal Washington Press	$220.00
1 Job and Card Press from	275.00
1 Super Royal Chase, with bars	7.00
1 Cap Chase	5.00
Assortment Job and Card Chases	7.50
1 Super Royal Roller Mould	14.40
Roller Stocks, &c.	8.50
1 Single Super Royal Imposing Stone	21.00
2 Double Stands with Racks, at $5.50	11.00
7 Pair Cases, at $2.00	14.00
12 Job Cases, at $1.13	13.50
6 Triple Cases, at $1.13	6.75
Cabinet 8 pair Cases	20.00
1 Super Royal Slice Galley	2.00
1 Quarto Brass Galley	4.00
Common Galleys	4.00
100 Yards Furniture	5.00
Saw and Miter Box	1.75
300 Hickory Quoins, at 50 cts.	1.50
1 Mallet	.25
1 Planer	.25
1 Lye Brush	.75
Brass Rules	12.00
Metal "	4.00
10 Yards Wood Rule, at 12 cts.	1.20
Leads	13.50
20 lbs. Quotations, at 27 cts.	5.40
2 lbs. Space Rules, at $1.20	2.40
20 lbs. Book Ink, at 50 cts.	10.00
2 lbs. Fine " at $1.00	2.00
5 lbs. Colored Ink, at $2.50	12.50
3 oz. Bronze, at 75 cts.	2.25
Composing Sticks	9 50
1 24 inch Mahogany Job Stick	2.00
6 lbs. Pearl, at $1.08	6.48
50 lbs. Nonpareil, at 58 cts.	2.600
50 lbs. Brevier, at 44 cts.	22.00
50 lbs. Long Primer, at 36 cts.	18.00
100 lbs. Small Pica, at 34 cts.	34.00
50 lbs. Pica, at 32 cts.	$16.00
50 lbs. Great Primer, at 32 cts.	16.00
50 lbs. Real Double Pica, at 32 cts.	16.00
50 lbs. Double Paragon or Canon, at 32 cts.	16.00
30 lbs. Great Primer Script, at 76 cts.	22.80
3 Fonts Condensed Black and Text	12.00
5 Fonts Ornamented Pearl to Long Primer	11.00
5 Fonts " Two Line Nonpareil to Great Primer	14.00
10 Fonts Ornamented Great Primer to Four-line Pica	35.00
2 Fonts Two Line	3.50
6 Fonts Condensed	10.50
2 Fonts Clarendon	5.50
2 Fonts Full Face	5.50
8 Fonts Gothic, Antique, Ionic, &c.	20.00
4 Fonts Large Metal Job Type	25.00
5 Fonts Wood Type Seven to Twelve Line Pica	30.00
3 Fonts Wood Type, Fourteen to Thirty Line Pica	25.00
Borders	12.00
Cuts, Ornaments, Dashes, &c.	10.00
Total	$1132.23

By deducting Presses and Appurtenances the above estimate is reduced to about $500, and can be further reduced for a small country Job Office to $300.

The following sizes of NEWS PAPER are always kept on hand by Paper Merchants: 22 by 32, 24 by 36, 26 by 37, and 28 by 42.

The following sizes are also considered regular sizes, though not so certainly kept on hand: 24 by 38, 27 by 42, 29 by 44.

Newspaper Heads and all other descriptions of cuts are designed and engraved by us with elegance and despatch.

Also, Newspaper Heads and Cuts ELECTROTYPED in the best manner and on reasonable terms.

ESTIMATE FOR A LARGE JOB OFFICE.

1 Imperial No. 5 Washington Press	$475.00
1 Card Press	150.00
1 Adams Job Press	375.00
1 Imperial No. 5 Roller Mould	18.40
1 Set Imperial No. 5 Distributors	30.00
1 Pair Imperial Chases, with bars	16.00
1 Pair Cap Chases, "	10.00
Job Chases, assorted	12.00
Job Roller Stocks and Handles	8.50
6 Double Stands with Racks, at $5.50	33.00
20 Pair Cases, at $2.00	40.00
20 Job Cases, at $1.13	22.50
10 Triple Cases, at $1.13	11.25
2 Cabinets, at $20.00	40.00
1 Cabinet with Standing Galley	27.00
3 Slice Galleys	7.50
4 Double Brass Galleys, at $2.75	11.00
2 Quarto Brass Galleys, at $4.00	8.00
10 Common Galleys	5.00
200 Yards Furniture, &c.	13.00
1000 Hickory Quoins	5.00
3 Mallets	.75
3 Planers	.75
6 Shooting Sticks	.30
3 Composing Sticks	11.50
1 30 inch Mahogany Job Stick	$2.50
2 Lye Brushes, at 75 cts.	1.50
2 Proof Brushes, at $1.00	2.00
Saw and Iron Miter Box	5.00
Wood Miter Box	.50
1 Dbl. Imperial No. 5 Imposing Stone	50.00
30 lbs. News Ink, at 25 cts.	7.50
25 lbs. Book " at 50 cts.	12.50
5 lbs. Fine " at $1.00	5.00
5 lbs. Poster " Blue, at $1.50	7.50
5 lbs. Poster " Red, at $1.50	7.50
5 lbs. Colored Ink, assorted, at $2.50	12.50
2 lbs. Varnish, at 50 cts.	1.00
1 lb. Gold Size	4.00
8 oz. Bronze, assorted colors, at 75 cts.	6.00
100 lbs. Leads, at 27 cts.	27.00
30 lbs. Quotations, at 27 cts.	8.10
3 lbs. Space Rule, at $1.20	3.60
Brass Rules	50.00
Metal "	10.00
20 Yards Wood Rule	2.40
25 lbs. Pearl, at $1.08	27.00
100 lbs. Nonpareil, at 58 cts.	58.00
200 lbs. Brevier, at 44 cts.	88.00
100 lbs. Long Primer, at 36 cts.	36.00

ESTIMATE FOR A LARGE JOB OFFICE—*Continued.*

300 lbs. Small Pica, at 34 cts.	$102.00
100 lbs. Pica, at 32 cts.	32.00
50 lbs. Great Primer, at 32 cts.	16.00
50 lbs. Double Small Pica, at 32 cts.	16.00
50 lbs. Double English, at 32 cts.	16.00
50 lbs. Double Paragon, at 32 cts.	16.00
50 lbs. Four Line Pica, at 32 cts.	16.00
30 lbs. Great Primer Script, at 76 cts.	22.80
50 lbs. Double Small Pica Script, at 72 cts.	36.00
25 lbs. Double Small Pica Mercantile Script, at 72 cts.	18.00
20 lbs. Double Great Primer Script, at 56 cts	11.20
30 lbs. Two Line Pica Caligraphic Script, at 68 cts	20.40
20 lbs. Canon Calligraphic Script, at 52 cts.	10.40
8 Fonts Ornamented Pearl to Long Primer	16.00
12 Fonts Ornamented Two Line Nonpareil to Great Primer	$34.00
15 Fonts Ornamented Great Primer to Four Line Pica	60.00
8 Fonts Extended and Two Line	20.00
6 Fonts Condensed Black and Text	25.00
8 Fonts Clarendon and Full Face	24.00
10 Fonts Gothic, Antique and Ionic	30.00
6 Fonts Large Metal Job Letter	36.00
20 Fonts Wood Type Seven to Fifty Line Pica	150.00
Borders	25.00
Cuts, Ornaments, Dashes, &c.	50.00
1 Standing Press, 2½ inch Screw	100.00
Total	$2469.35

ESTIMATE FOR A BOOKBINDING ESTABLISHMENT.

1 Standing Press, from $90 to $125.00	
1 Ruling Machine	150.00
An assortment of Ruling Pens, from $7.00 to 9.00	
1 Pair 12 inch Squaring Shears	12.00
1 Cutting Press and Plow	9.00
1 Knife and Pin for do	1.00
Plow and four Boards for squaring paper	80.00
Screw with iron point for do. and Nut	3.00
Table-Shears and Table	35.00
Sewing Bench	1.75
1 Finishing Press	2.00
1 Pair Backing Boards, each 12×18 inches	3.75
1 Backing Hammer	2.00
1 Beating Hammer	3.00
1 Backing Iron	1.50
1 Pair Compasses	1 25
1 " Hand Shears	1.00
1 Paring Knife and Folder	.25
20 feet Cutting Board	$.60
24 feet Grooving or Backing Rods	.75
12 Pressing Boards	9.00
1 Cast Steel Polisher	3.00
1 Lettering Palette	3.50
3 Fillets	6.00
3 Blank Rolls	17.00
3 Gilding Rolls	16.00
Edge Rolls	10.00
1 Gold Cushion $3.00, 1 Gold Knife 50c.	3.50
2 Agate Burnishers	3.25
1 Type Cabinet $6.00, Type $8.00	14.00
1 Iron Square	1.25
1 Glue Pot and Brush	1.20
1 Back Saw	1.75
1 Grindstone, with Frame	7.50
Total	$487.80

ESTIMATE FOR A SMALL LITHOGRAPHIC OFFICE.

1 Lithographic Press	$150.00
6 Stones	24.00
2 Ink Rollers	10.00
Ink	12.50
4 gallons Varnish	8.00
Sponges, Gum Arabic, Turpentine, &c.	$1.50
Stone and Muller	2.50
Total	$208.50

ESTIMATE FOR A COPPERPLATE PRINTING OFFICE.

Press, 15 inches wide	$115.00
Ink Roller	4.00
Ink Stone and Muller	2.50
Cast Iron Stove for heating plates, and six feet pipe	3.00
Bench, 6 feet by 20 feet	6.00
1 pair Press Boards, 10×16 inches	1.00
1 yard superfine broadcloth Blanket	5.00
10 lb. best Frankfort Black	5.00
1 gallon Burnt Linseed Oil and Oil Can	2.00
50 Bookbinders' Boards, for drying impressions	2.50
Total	$145.00

ESTIMATE FOR AN ELECTROTYPE ESTABLISHMENT.

Capable of turning out Eighteen 12mo Pages per day.

1 Press for Moulding	$175.00
1 Tinning Pot	7.00
2 Building Irons	4.00
3 Brass Moulding Cases, $14.50 each	43.50
1 Metal Pot for backing up	25.00
1 Backing Pan (Patent)	75.00
1 Pump and Hose, for syringing	12.00
1 Pair Bellows	5.00
1 Battery	$100.00
1 Precipitating Trough	25.00
1 Shaving Machine	100.00
2 Planers and 1 Block	18.00
Black Lead, $2.50 per lb.	
	$539.50

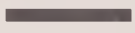
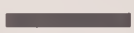
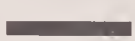
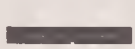
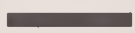
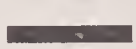
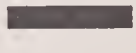
Capable of turning out Seventy 12mo Pages per day.

1 Moulding Press	$275.00
1 Tinning Pot	7.00
2 Building Irons	4.00
10 Brass Moulding Cases, $14.50 each	145.00
1 Metal Pot, for backing up	25.00
2 Backing Pans, (patent)	150.00
1 Pump and Hose, for syringing	12.00
1 Pair Bellows	5.00
1 Battery	200.00
1 Precipitating Trough	50.00
1 Shaving Machine	100.00
Extra head for Do	$15.00
2 Planers and 1 Block	18.00
Black Lead, $2.50 per lb.	
	$1006.00

A crane for lifting the backing pan to and from the metal pot would be needed, which, with the setting of the pot and the work bench, would have to be done on the premises, and would cost about 100.00

R. Hoe & Co's Brass Rule.

R. Hoe & Co's Brass Rule.

No. 47.		12 cts.
" 48.		14 "
" 8.		16 "
" 9.		20 "
" 49.		20 "
" 29.		24 "
" 23.		28 "
" 30.		32 "
" 50.		36 "
" 51.		40 "
" 52.		45 "
" 53.		50 "
" 24.		14 "
" 10.		16 "
" 11.		20 "
" 12.		24 "
" 13.		28 "
" 14.		32 "
" 54.		36 "
" 25.		40 "
" 55.		45 "
" 56.		50 "

R. Hoe & Co's Brass Rule.

No.	Face.	Body.	Cts. pr. ft.
57			8
58			8
59			8
22			8
60			8
61			8
62			8
63			8
17			8
18			12
64			12
20			18
65			18
19			15
66			15
67			15
68			15
69			15
21			18
70			18
26			28
15			36
16			40

R. Hoe & Co's Brass Rule.

No.	Face.	Body.	Cts. pr. ft.
71			15
72			22
73			22
74			24
75			24
76			22
77			22
78			22
79			22
80			22
81			22
82			24
83			24
84			24
85			22
86			22
87			22
88			22
89			22
90			24
91			24
92			22

R. Hoe & Co's Brass Dashes.

Cut to suit the Column.

No. **8 Cents each.** No.

19   20

10 Cents.

1   10

2   11

3   12

4   13

5 14

6   15

7   16

8   17

9   18

12 Cents.

21   28

22   29

23   30

24   31

25   32

26   33

27   34

15 Cents.

35   41

36 42

37 43

38   44

39   45

40   46

R. Hoe & Co's Labor-Saving Rule.

Composed of 12 Pieces.

Composed of 12 Pieces.

Composed of 12 Pieces.

Composed of 10 Pieces.

Composed of 10 Pieces.

Composed of 10 Pieces.

R. Hoe & Co's Labor-Saving Rule Case.

Left Miter.	Left Miter.	Left Miter	Left Miter	Left Miter	Left Miter	Right Miter	Right Miter	Right Miter	Right Miter.	Right Miter	Right Miter
2	2½	3	5	5½	6	6	5½	5	3	2½	2
36	35	34	33	32	31	30	29	28			
19	20	21	22	23	24	25	26	27			
18	17	16	15	14	13	12	11	10			

1	1½
2	2½
3	3½
4	4½
5	5½
6	6½
7	7½
8	8½
9	9½

44	45	46	47	48	49	50
43	42	41	40	39	38	37

THE careful printer will realise great advantages in the use of these Labor-Saving Rules. For tables of varying dimensions in book-work they are excellently adapted, and the facility with which they may be put together in lengths differing only an em, recommends them for all jobbing purposes in which rapidity of execution is essential. The shorter pieces of the Single Rules, from 1 to 10, comprising 19 different sizes, will be found an economical substitute for the ordinary metal space rules in the execution of mathematical or arithmetical works.

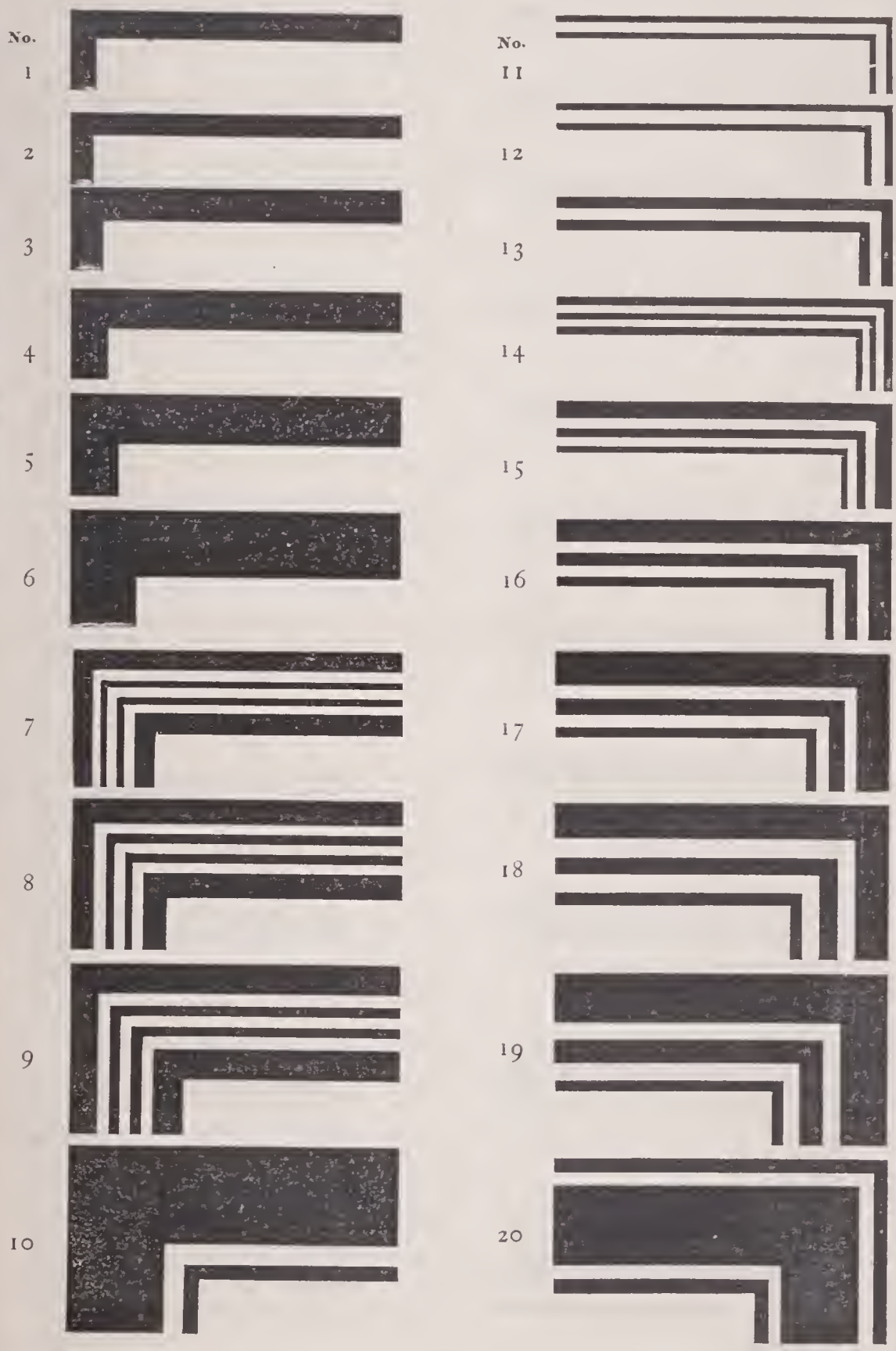
PRICES.

Sets of the Single Rule, assorted lengths ..... per lb. $2.00
" " Parallel or Double Rule, assorted lengths..... .. " 1 75

Sets of the Dotted Rule, assorted lengths..... per lb. $2 00
Additional pieces of any length up to 50 ems, will be furnished to order.

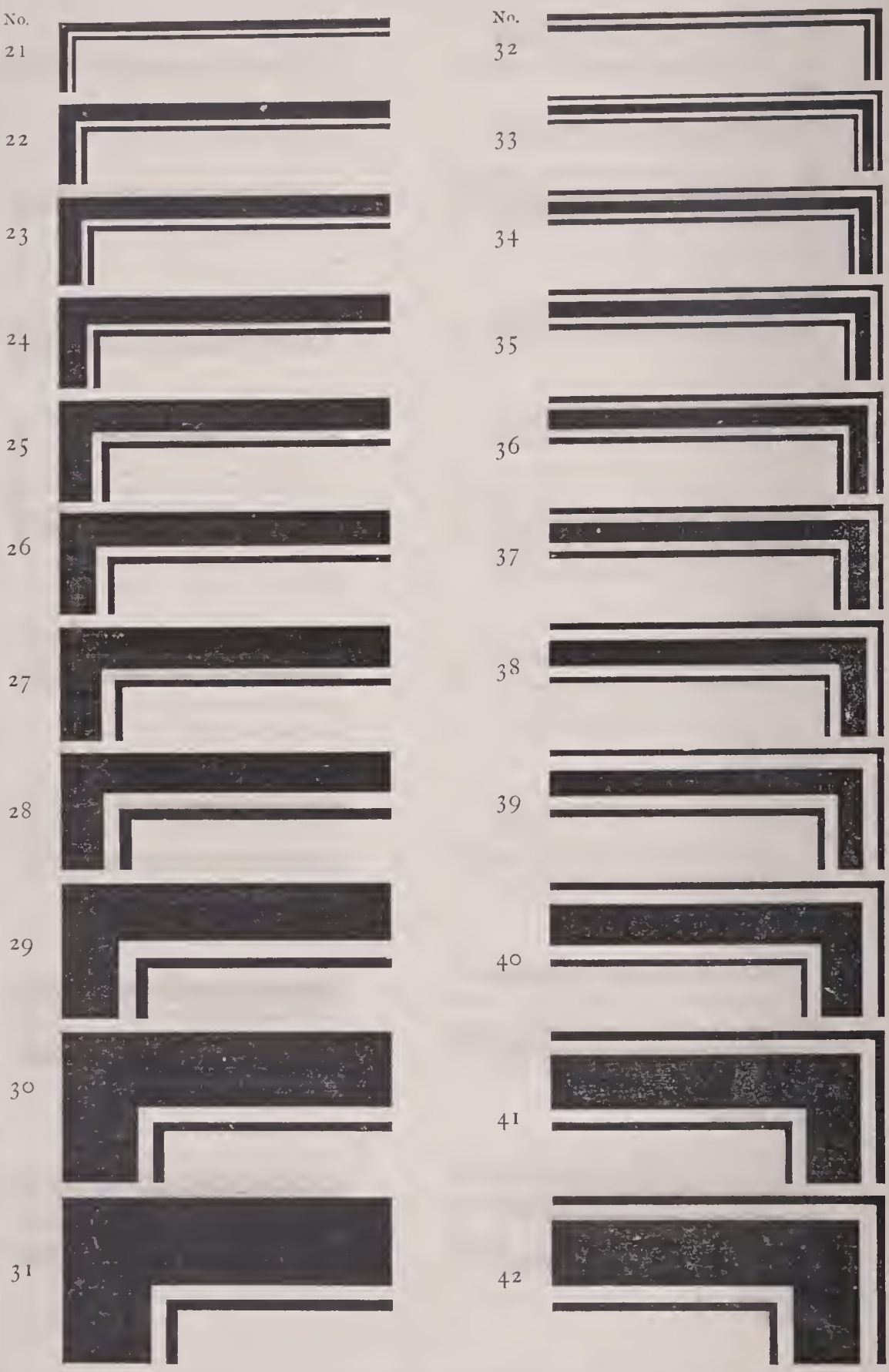
R. Hoe & Co's Wood Rule.

Twelve Cents per yard, made to any pattern.



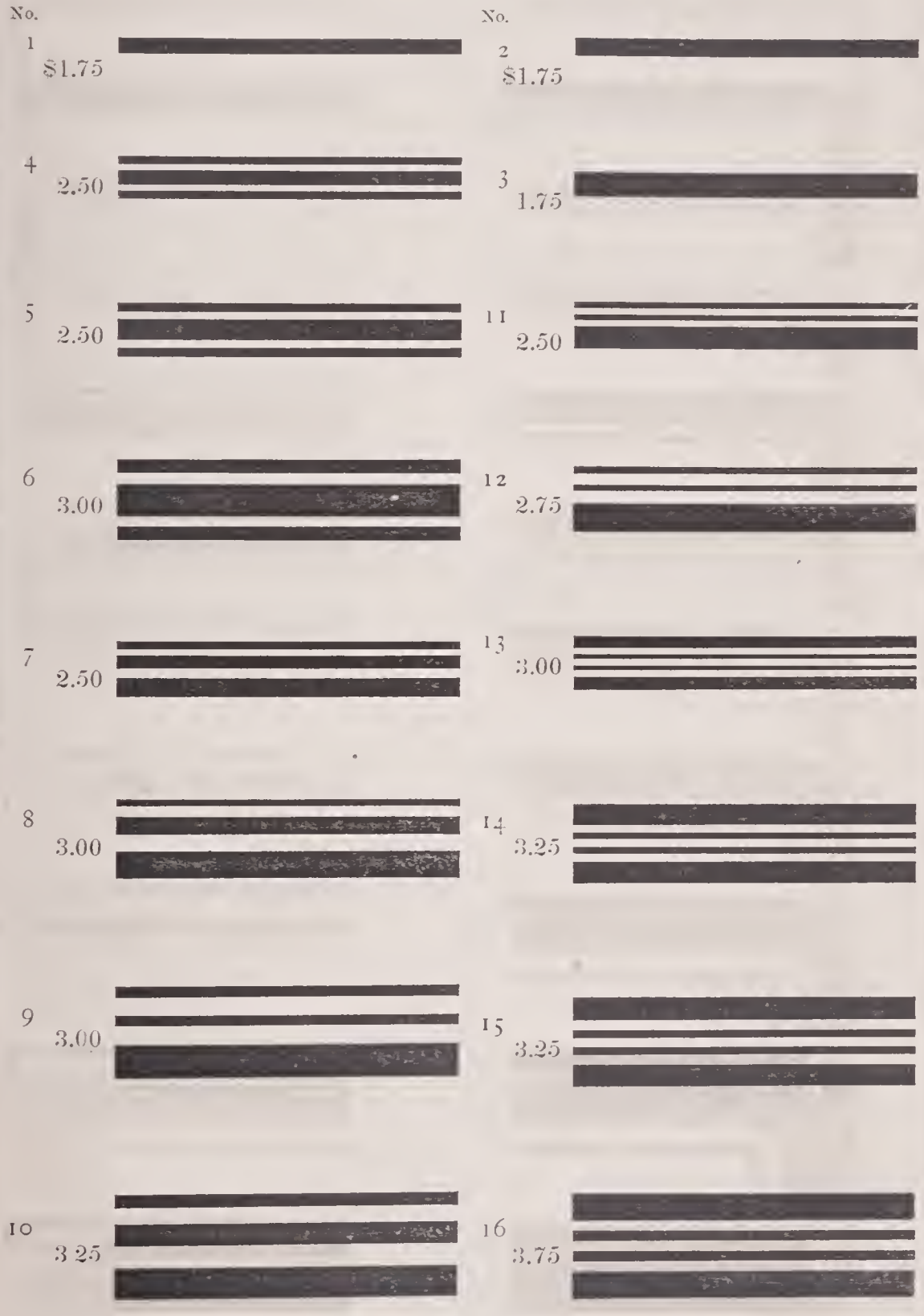
R. Hoe & Co's Wood Rule.

Twelve Cents per yard, made to any pattern.



R. Hoe & Co's Steel Lines for Bookbinders.

Price per foot.



R. Hoe & Co's Steel Lines for Bookbinders.

Price per foot.

No.		No.	
17	$2 00	25	$2.00
18	2 50	26	2.50
19	2.50	27	2.75
20	3.00	28	3.00
21	2.00	29	2.00
22	2.25	30	2.25
23	2.50	31	2.50
24	2.75	32	2.75

SPECIMENS

OF

SOLID & MORTISED

TYPE METAL

FLOURISHES

Imported by

R. Hoe & Co.

29 & 31 Gold St. N.Y.

Foundry Street, Boston.

NEW-YORK AND BOSTON.

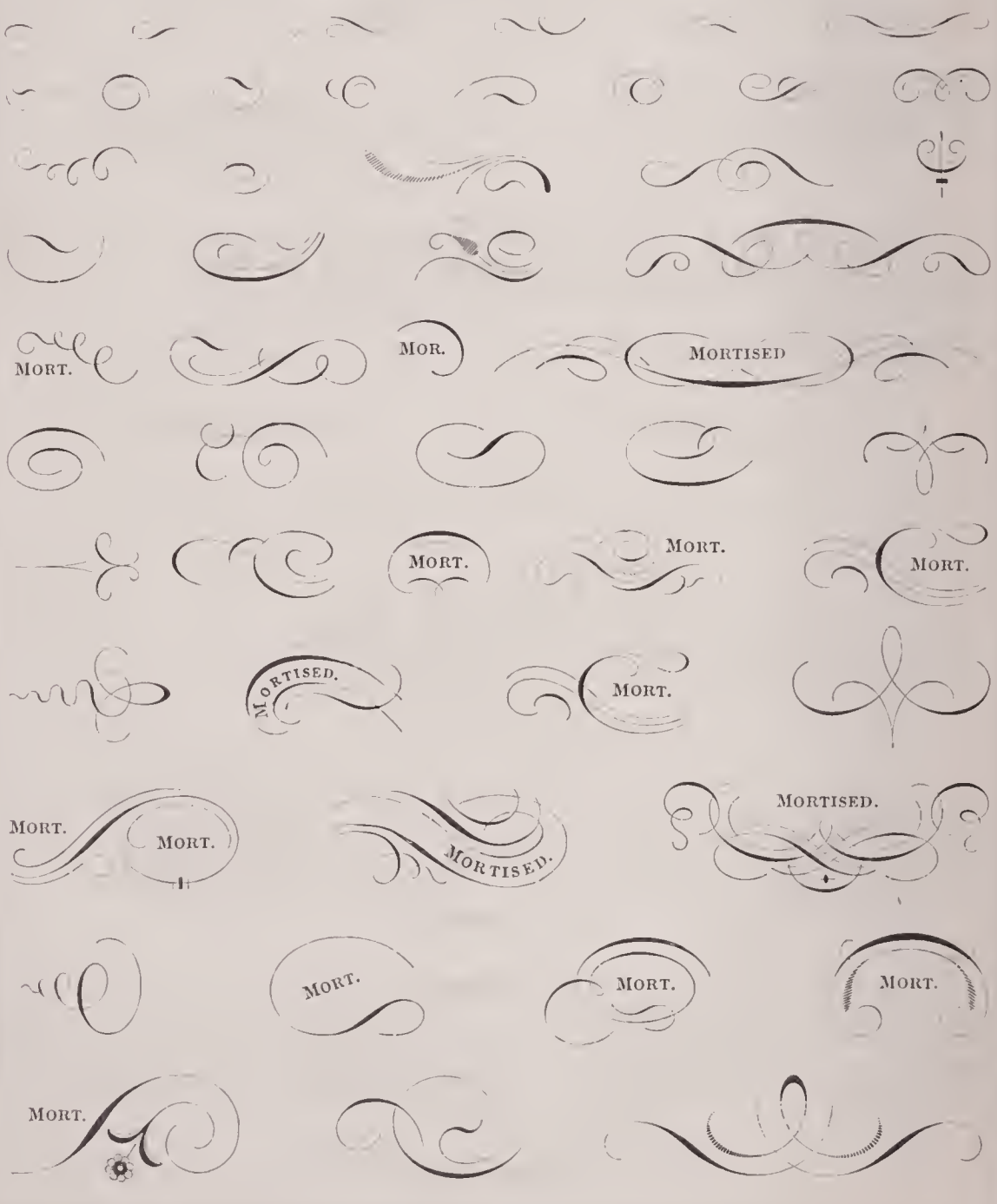
Made by C. Derriey, Paris, From very hard type metal.

PRICE

$30 & $60 per set.

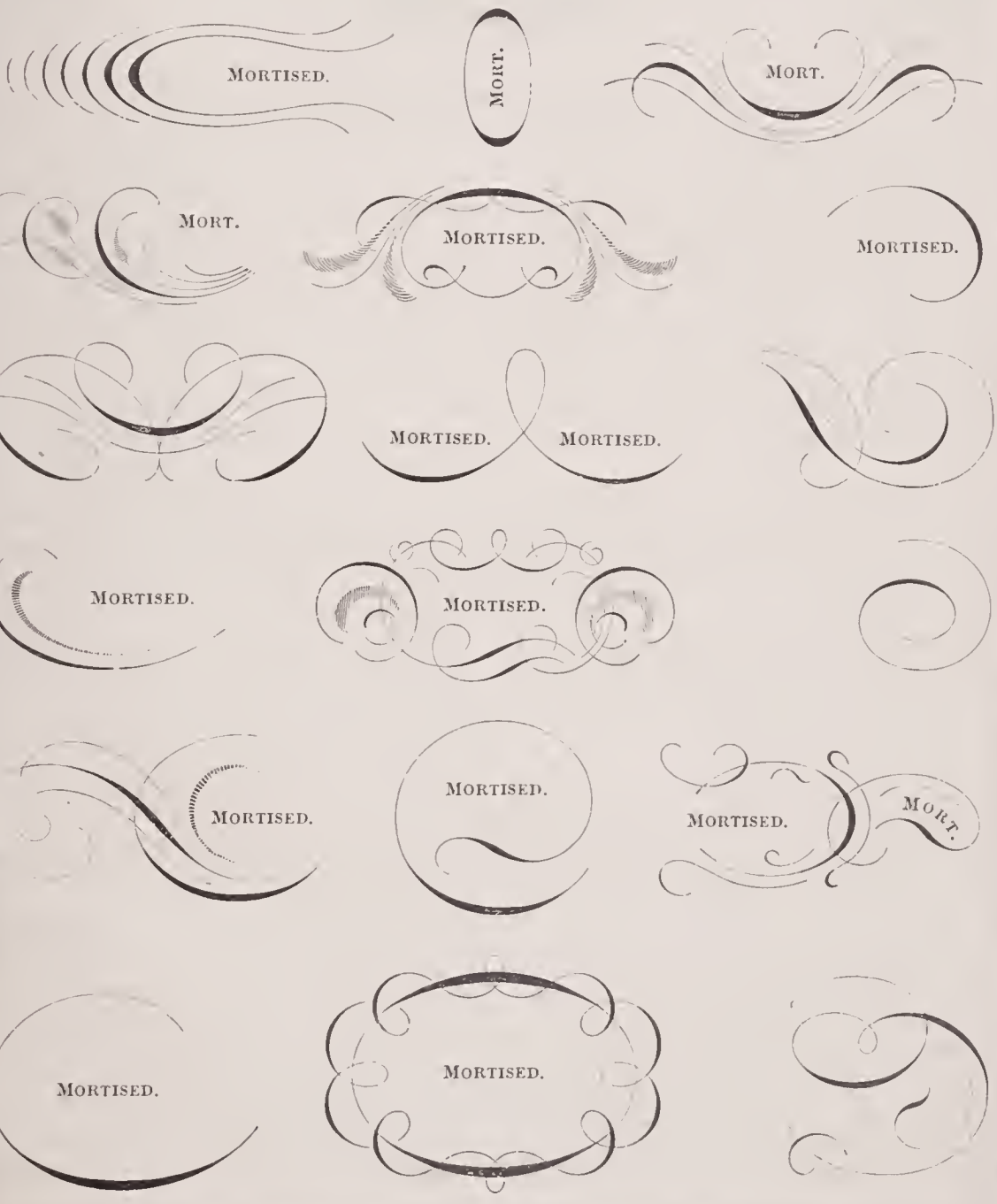
FLOURISHES.

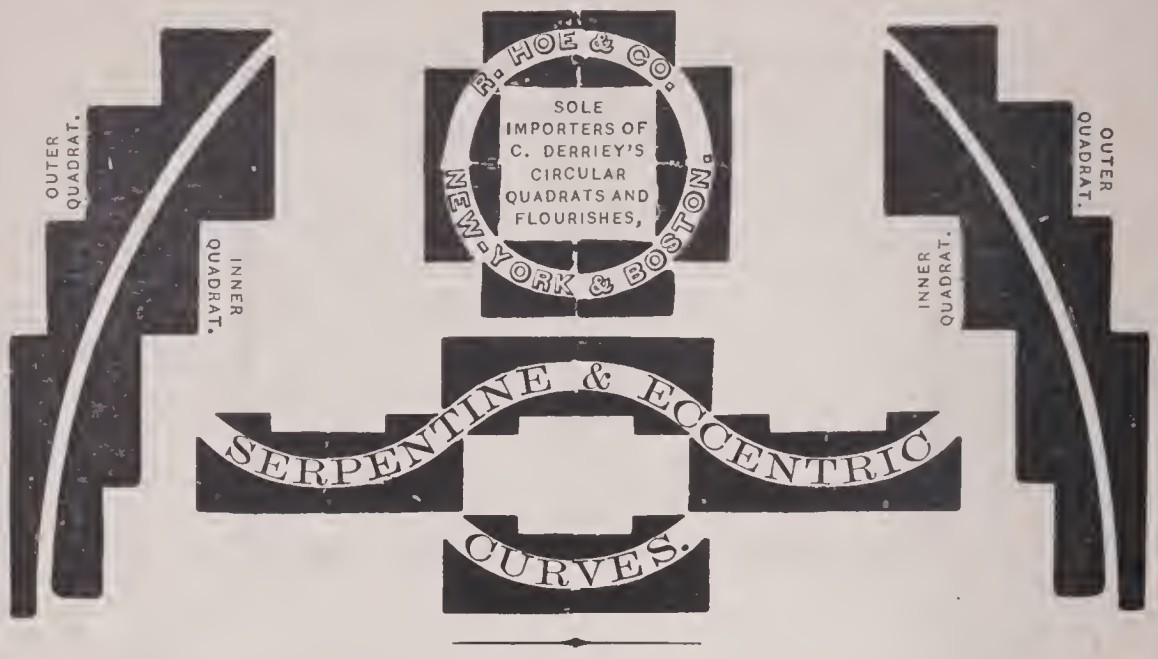
THESE Flourishes are mostly in pairs of rights and lefts, the specimen pages showing one side only. They are cast on regular bodies, and are furnished with justifying quadrats of various sizes. The mortises are accurately cut and permit the ready introduction of type.



FLOURISHES

ARE a most valuable aid to ornamental typography. They will be found useful for letter and note headings, cards, circulars, and title pages, enabling the careful compositor and skillful pressman to produce an effect but little inferior to copperplate printing.





Circular Quadrats

ARE the neatest, cheapest and most trustworthy material for printing curved lines. The annexed diagram (impressions from the quadrats) will show their construction. They are made of various sizes, so as to form circles or parts of circles from 1 to 24 inches in diameter. Each piece is exactly one-eighth of a full circle, and, when combined with similar pieces, will form quarter, half, three-quarter and full circles. By reversing the combination of some of the pieces, serpentine and eccentric curves may be made of any length or depth. They are made from type-metal of unusual hardness and solidity, and are carefully finished. Each piece is marked with a distinct number.

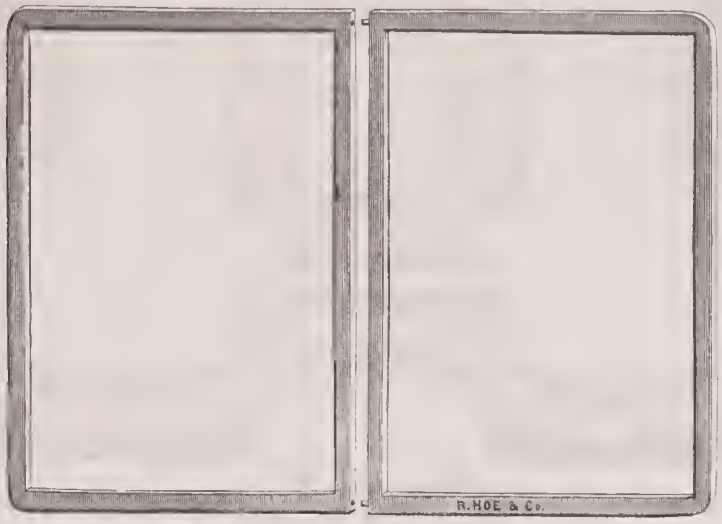
There are two kinds: *Inner Quadrats*, with convex surface, and *Outer Quadrats*, with concave surface—as may be seen in the diagram. The curved line is produced by placing the convex and concave surfaces parallel to each other, so that when locked up firmly they hold the type inserted between them. The other sides of the quadrats are flat and right angled, to allow a close introduction of type, and an easy justification with common quadrats.

DIRECTIONS FOR COMPOSING CIRCULAR QUADRATS for the ordinary size of one-fourth circle.

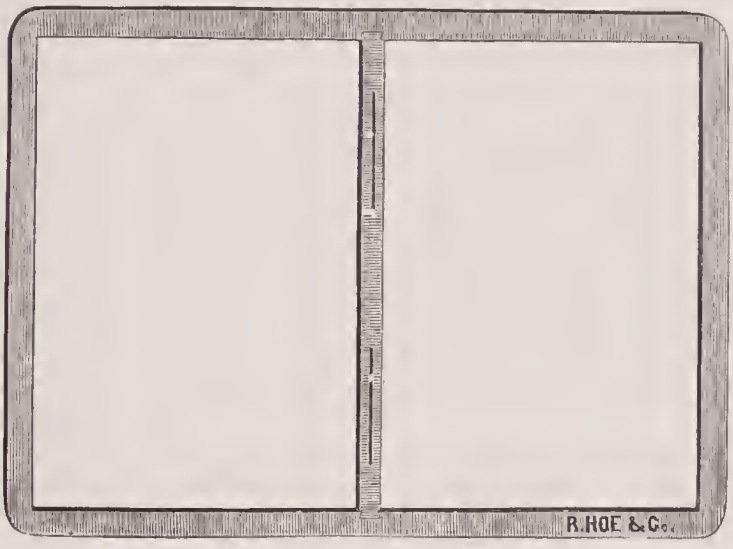
Select two outer quadrats (each marked with the same number) of the length required. Join the smaller ends, and justify the extremities carefully with ordinary quadrats.——Set the line of type in the hollow of the curve, but without justification.——Then insert two inner quadrats (of the same number) of smaller size than the outer quadrats. The size of the inner quadrats will depend upon the size of the type. A line of canon will require smaller inner quadrats than will be needed for a line of pica, and *vice versa*. As the one increases the other diminishes. An ordinary clock dial will afford a good illustration. The space between the numerals X and I is one-fourth of a circle. The curved line described around the foot of these numerals is much less than the curve at the top. If the size of the numerals from X to I is decreased, the inner curve will be greater; if it is increased, it will be less. This will explain why the inner quadrat should be of less size than the outer, and why it should diminish as the size of the type increases.——The curve of the inner quadrat should be perfectly parallel with the curve of the outer quadrat. When they are parallel they bind the type between firmly in every part. Then justify the line of type.

As the sizes of type vary with different foundries, it will often be found that the inner quadrat of the nearest suitable size will not meet the type in every part. This difficulty may be obviated by introducing slips of card *of the same length as the line of type.* Thus increase the distance between the quadrats until the curved surfaces are perfectly parallel with each other. The line of type cannot be justified unless they are parallel. When the inner and outer quadrats are thus adapted to each other, they will not only bind the type firmly, but will also present a perfectly flat and square surface on the other side. Unless they are parallel on the inner sides, and flat and square on the outer sides, the justification is not good; and the remedy must be found in changing the size of the inner circle, or in increasing the distance between the curved lines, by the use of larger type, or by paper or card board. When thus composed the type will be perfectly tight and secure, and the curved white line strictly accurate.

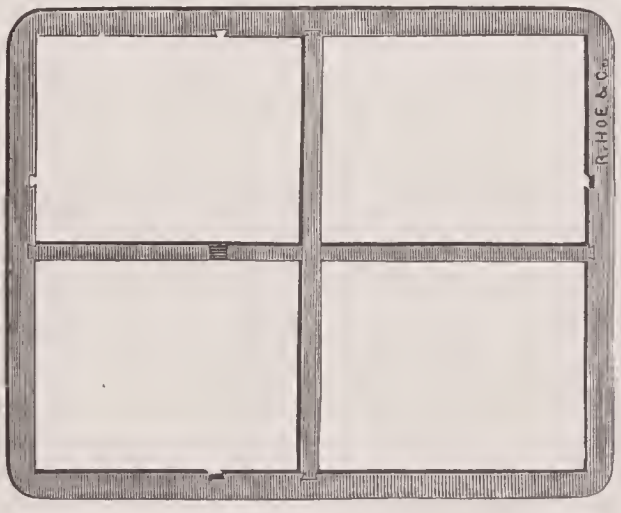
REMARKS.—As these quadrats are perfect segments of a large circle, they cannot be increased or diminished without destroying the truth of the curve. If the thin ends are pieced out with common quadrats, good justification will be rendered impossible; if they are shortened by cutting off, they are ruined. Bits of lead or short pieces of card between the curved surfaces are also wrong, they destroy that exact parallelism which is necessary for the security of the type. Very accurate justification of the outer extremities of the quadrats is also indispensable. If the curved surfaces are kept parallel, and the flat surfaces kept square, no difficulty will be found in using them, and they will prove a valuable aid in ornamental printing.



Two Half-Chases.



News Chase.



Book, or Shifting-Bar Chase.

In ordering Chases, give the outside dimensions as accurately as possible, and state what kind of Chases are wanted.

For Prices see pages **4** *and* **5**.

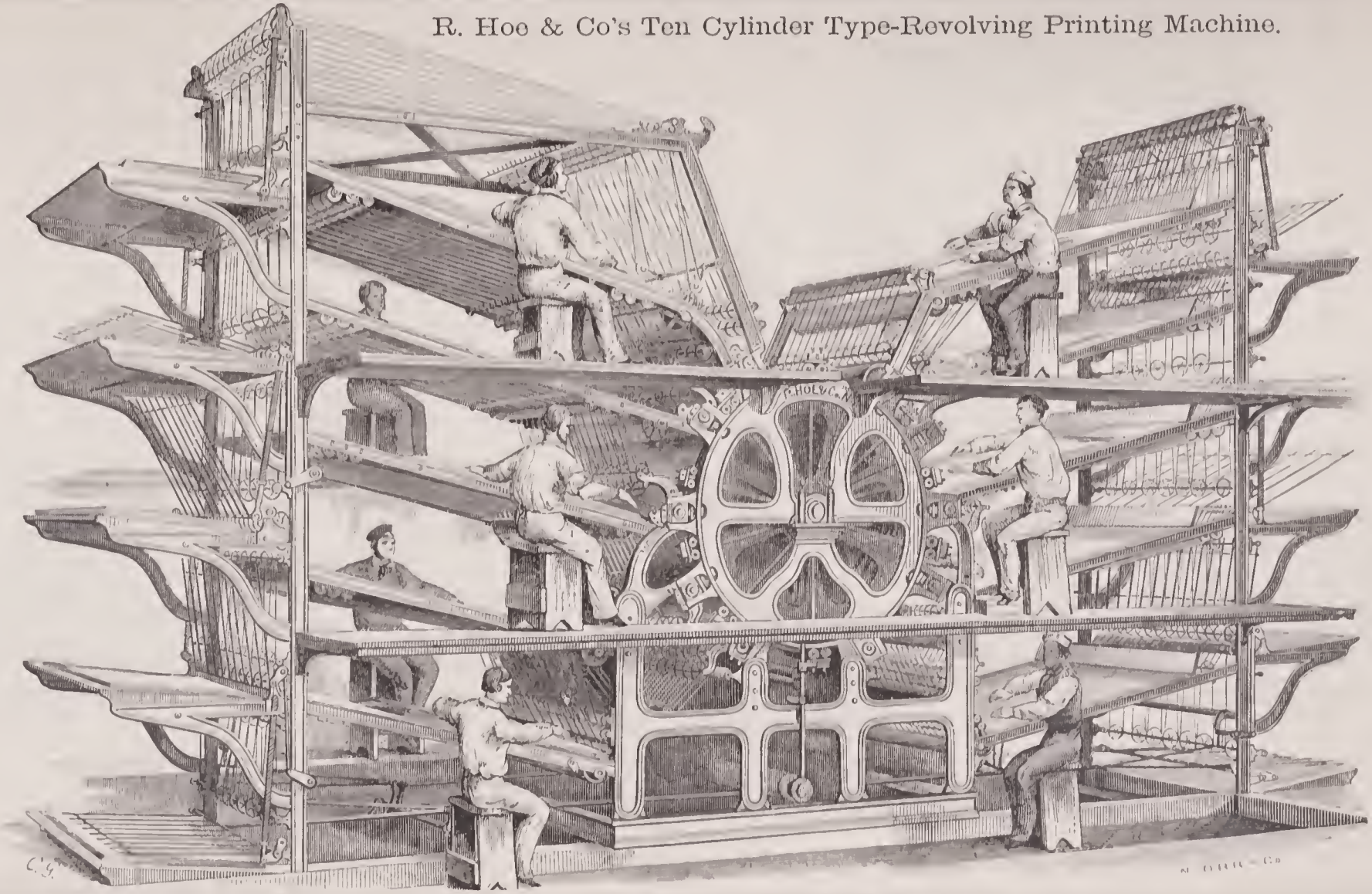
Description of the Type-Revolving Printing Machine.

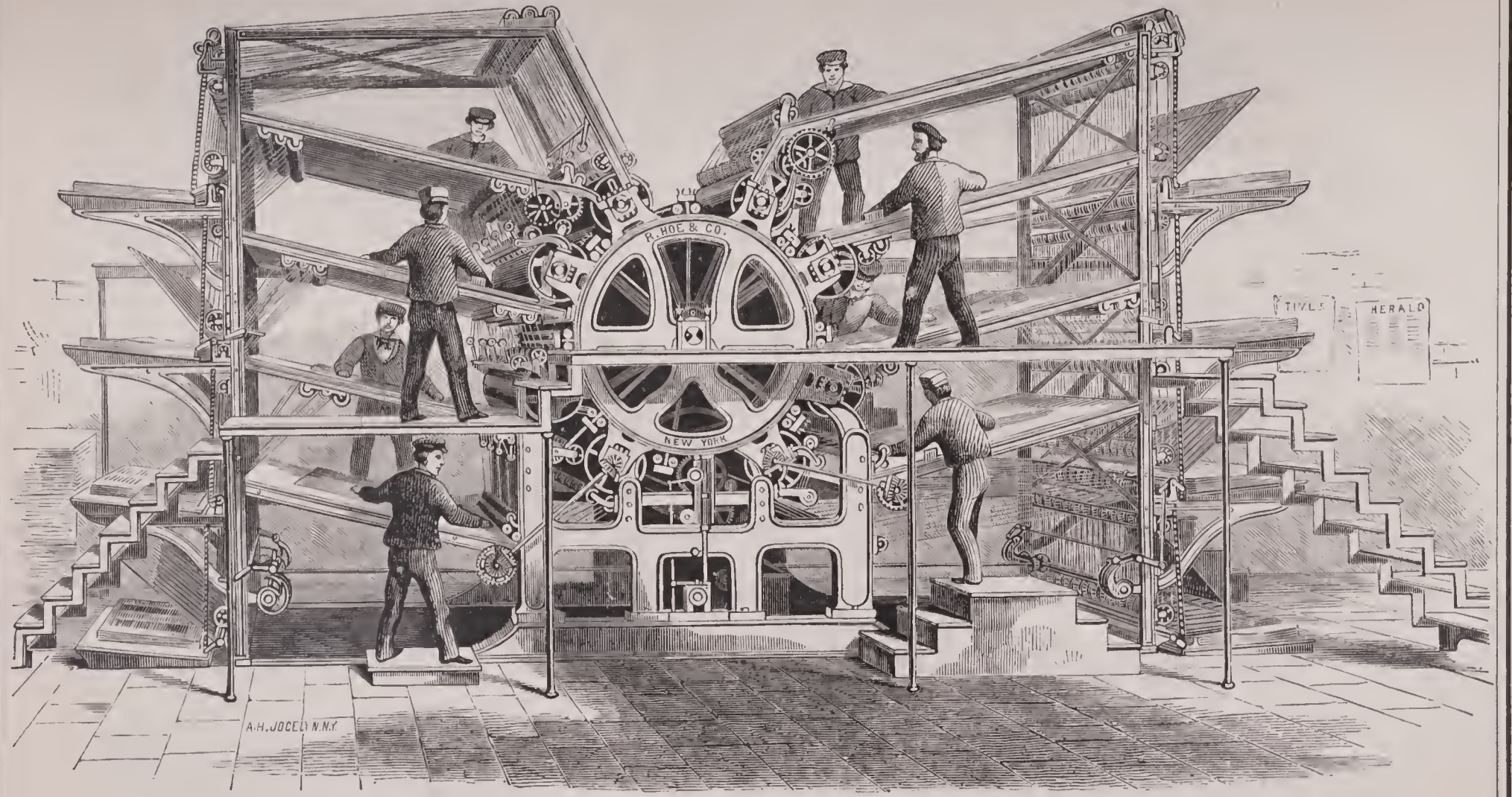
THE Type-Revolving Printing Machine manufactured by our firm was invented by Col. RICHARD M. HOE. It is, as its name indicates, on the rotary principle; that is, the form of type is placed on the surface of a horizontal revolving cylinder of about four and a half feet in diameter. The form occupies a segment of only about one-fourth of the surface of the cylinder, and the remainder is used as an ink-distributing surface. Around this main cylinder, and parallel with it, are placed smaller impression cylinders, varying in number from four to ten, according to the size of the machine. The large cylinder being put in motion, the form of types is carried successively to all the impression cylinders, at each of which a sheet is introduced and receives the impression of the types as the form passes. Thus as many sheets are printed at each revolution of the main cylinder as there are impression cylinders around it. One person is required at each impression cylinder to supply the sheets of paper, which are taken at the proper moment by fingers or grippers, and after being printed are conveyed out by tapes and laid in heaps by means of self-acting flyers, thereby dispensing with the hands required in ordinary machines to receive and pile the sheets. The grippers hold the sheet securely, so that the thinnest newspaper may be printed without waste.

The ink is contained in a fountain placed beneath the main cylinder, and is conveyed by means of distributing rollers to the distributing surface on the main cylinder. This surface being lower, or less in diameter than the form of types, passes by the impression cylinder without touching. For each impression there are two inking rollers which receive their supply of ink from the distributing surface of the main cylinder which raise and ink the form as it passes under them, after which they again fall to the distributing surface.

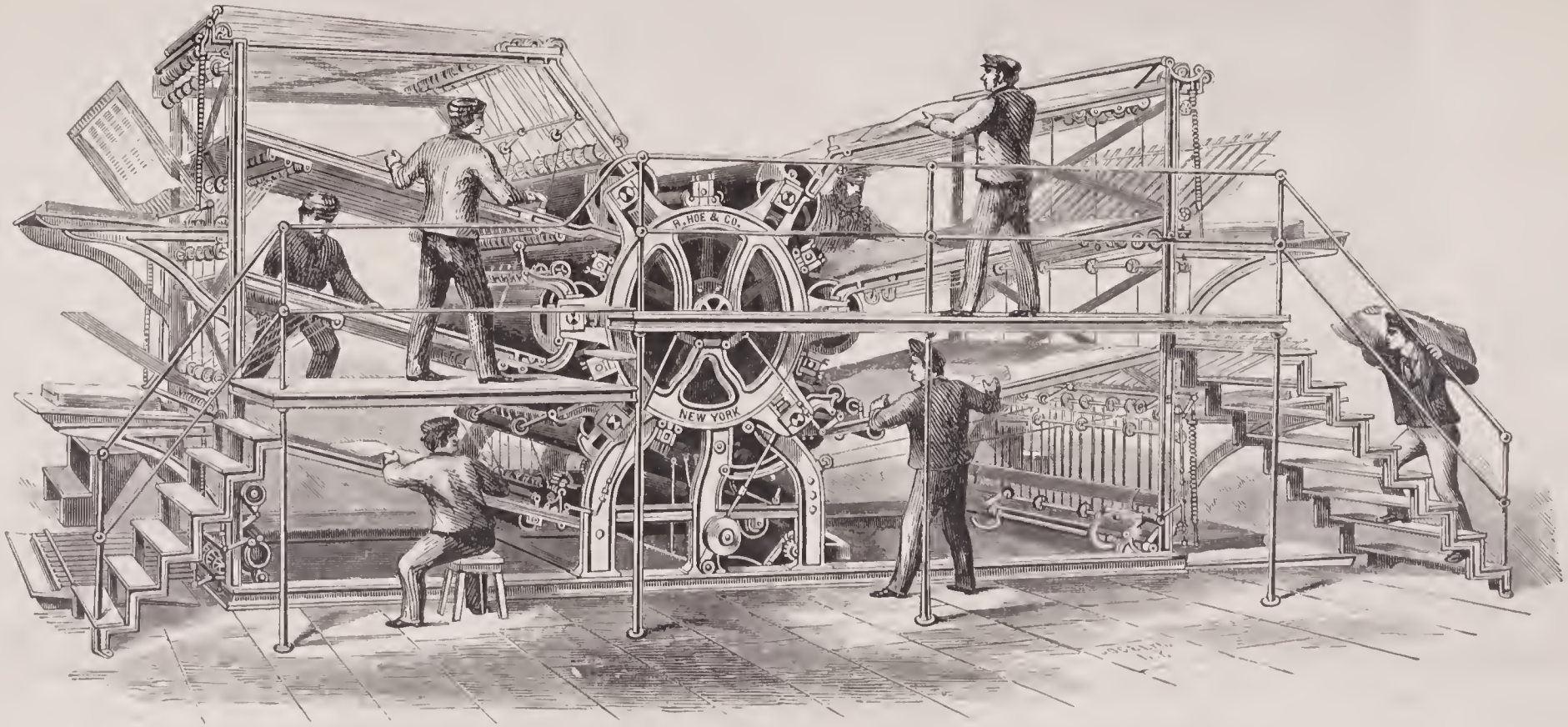
Each page of the paper is locked up on a detached segment of the large cylinder, which constitutes its bed and chase. The column rules run parallel with the shaft of the cylinder, and are, consequently, straight, while the head, advertising and dash rules are in the form of segments of a circle. The column rules are in the form of a wedge, with the thin part directed toward the axis of the cylinder, so as to bind the types securely. These wedge shaped column rules are held down to the bed by tongues projecting at intervals along their length which slide in rebated grooves cut crosswise in the face of the bed. The spaces in the grooves between the column rules are accurately fitted with sliding blocks of metal even with the surface of the bed, the ends of which blocks are cut away underneath to receive a projection on the sides of the tongues of the column rules. The form of type is locked up in the bed by means of screws at the foot and sides, by which the type is held as securely as in the ordinary manner upon a flat bed—if not even more so. The speed of these machines is limited only by the ability of the feeders to supply the sheets. The four cylinder machine is run at a speed of over ten thousand per hour, the six cylinder machine fifteen thousand an hour, the eight cylinder machine twenty thousand, and the ten cylinder machine twenty-five thousand. This system combines the greatest speed in printing, durability of the machinery, and economy of labor.

R. Hoe & Co's Ten Cylinder Type-Revolving Printing Machine.

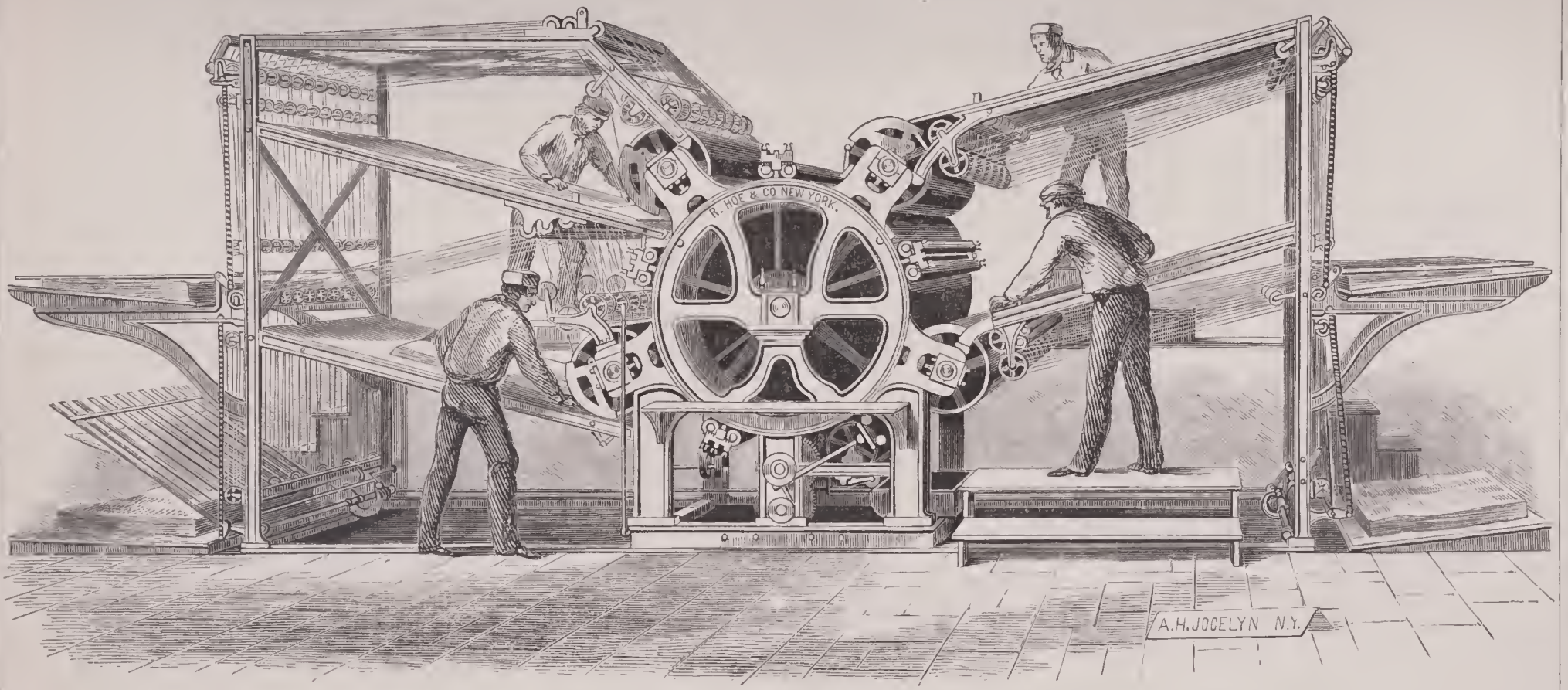




R. Hoe & Co's Eight Cylinder Type-Revolving Printing Machine.



R. Hoe & Co's Six-Cylinder Type-Revolving Printing Machine.



R. Hoe & Co's Four Cylinder Type-Revolving Printing Machine.

R. Hoe & Co's Double Cylinder Printing Machine.

(See page 32.)

In this Machine the form of types is placed on a flat bed, and the impression taken by means of two cylinders, each of which alternately takes a sheet and receives an impression from the same form while it is passing under them. The sheets are supplied by two attendants, and, if required to print short editions of various sizes, it will be necessary to have a boy at each end of the press to receive the printed sheets; but where large editions or forms of uniform size are worked, not requiring frequent changes of the tape-pulleys, the self sheet-flying apparatus is furnished when ordered, and is found very efficient and economical, placing the printed sheets in heaps with precision, and dispensing entirely with the two boys otherwise required for that purpose.

The large amount of printing ordinarily done on these presses, and the consequent speed required, have rendered necessary greatly increased strength and weight of material in all the parts, together with simplicity in the mechanical arrangements, and the utmost perfection of workmanship. The noise and annoyance occasioned by the concussion of the bed against the springs, which are placed at each end of the machine to overcome the momentum of the bed, has been removed by means of adjustable india-rubber buffers placed at the points of contact, which in no way interfere with the lively and certain action of the spiral springs.

SIZES AND PRICES.

No. 1, Bed 28 × 41 inches.... $2,750	No. 4, Bed 34 × 54 inches .. $3,500
2, " 31 × 46 " 3,000	5, " 36 × 57 " ... 3,750
3, " 31 × 50 " 3,250	6, " 40 × 60 " 4,250

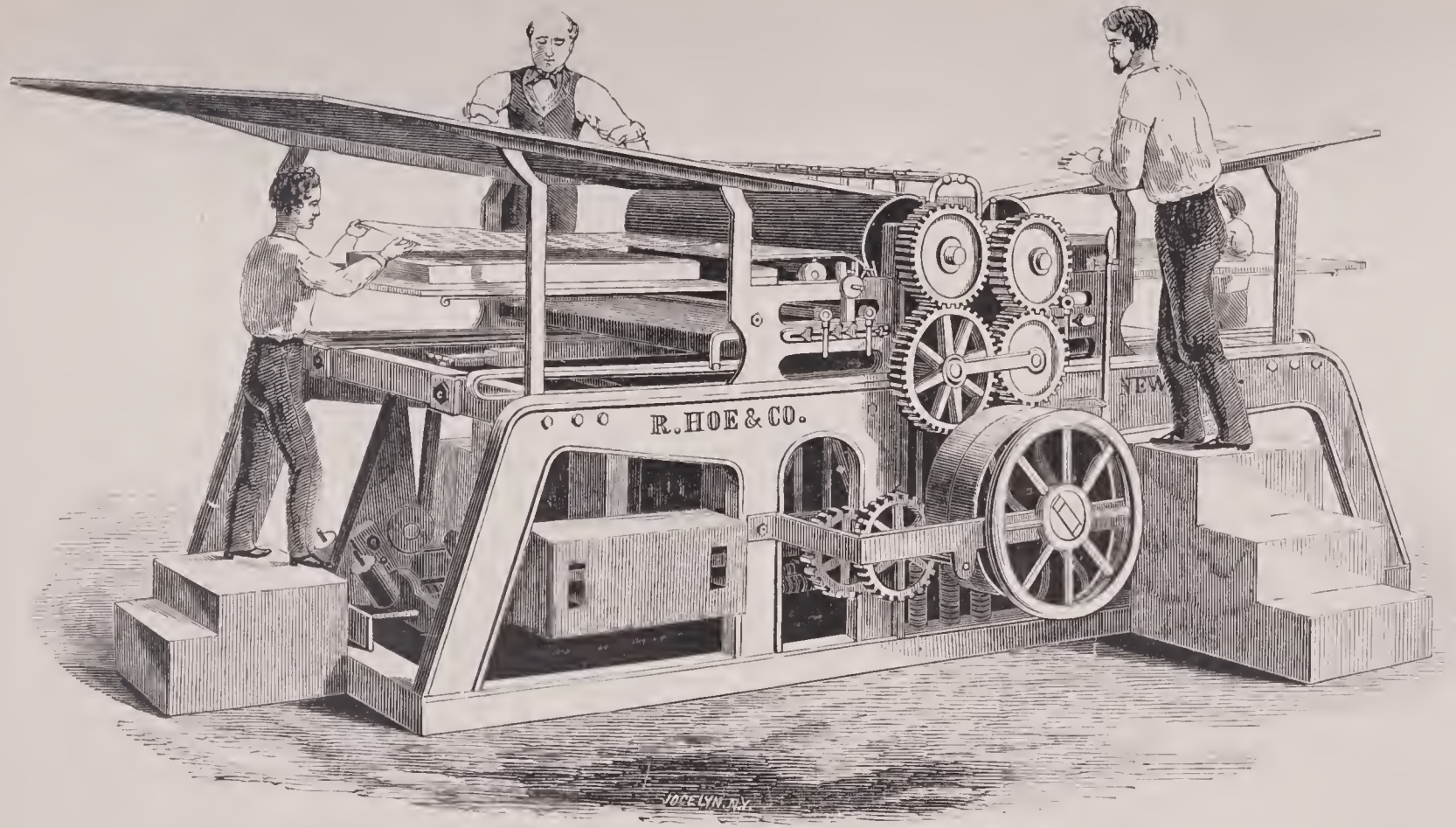
Registering or pointing apparatus .....$100 extra.
Self acting sheet-flyers.... ..... 350 "

Larger or smaller sizes made to order.

Boxing and Carting, $25 to $50.

Each machine is furnished with Roller Moulds, two sets Roller Stocks, Blankets, Bands, Counter Shaft, two Hangers and Pulley.

Terms of Payment.—One-half cash, one-half six months for satisfactory note. 2½ per cent. discount from the whole bill, if all is paid in cash.



R. Hoe & Co's Patent Improved Double Cylinder Printing Machine.

R. HOE & CO'S

Single SMALL Cylinder Printing Machine.

(See page 34.)

IN its arrangement, this machine is similar to the Double Cylinder Machine, except that it has but one impression cylinder. The small size of the cylinder allows the machine to be constructed in a very compact manner, and thus shortens the distance which the bed travels, thereby considerably increasing the number of impressions in a given time, beyond the single *large* cylinder press.

One person only is required to feed down the paper, whose position is but a step from the floor. It will give from 2,000 to 3,000 impressions per hour, with perfect safety to the machinery. The printed sheets are thrown out by a fly-frame in a uniform pile. Register sufficiently accurate for newspaper and job work is obtained by the patent feed guides, which are attached to each press. When required, a registering or pointing apparatus is furnished, and the press may then be used advantageously for book work.

This press is made in the same substantial manner as the *double* cylinder press described on page 31, with buffers similarly arranged to prevent noise.

When driven by *steam* power, No. 8 occupies 8 feet by 12 feet. If by *man* power, requiring fly wheel and stand, it occupies 8 feet by 16 feet.

SIZES AND PRICES.

No. 1,	Bed 25 × 33	inches	$1,390	No. 5,	Bed 33 × 52	inches	$2,150
2,	" 28½ × 41	"	1,750	6,	" 36 × 54	"	2,250
3,	" 31 × 46	"	1,875	7,	" 36 × 57	"	2,450
4,	" 31 × 50	"	2,050	8,	" 40 × 60	"	2,600

Boxing and Carting, $20 to $50.

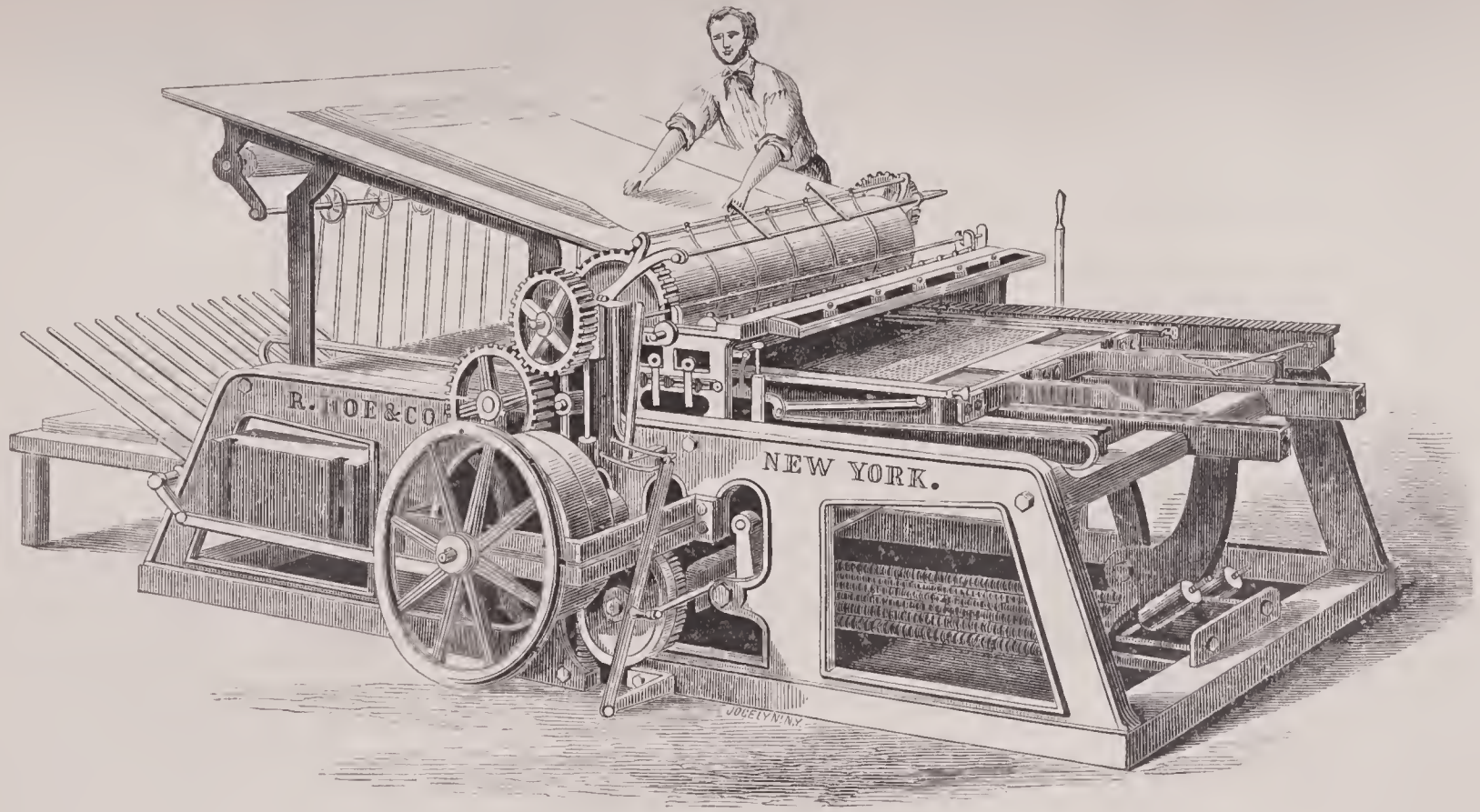
Each machine is furnished with Roller Moulds, two sets of Roller Stocks, Blankets, Band, Counter Shaft, two Hangers and pulley.

Registering or pointing apparatus, $50 extra.

Fly Wheel and Stand, small size, $50.

Fly Wheel and Stand, large size, $75.

TERMS OF PAYMENT.—One-half cash, one-half six months for satisfactory note. 2½ per cent. discount from the whole bill if all is paid in cash.



R. Hoe & Co's Patent Single SMALL Cylinder Printing Machine.

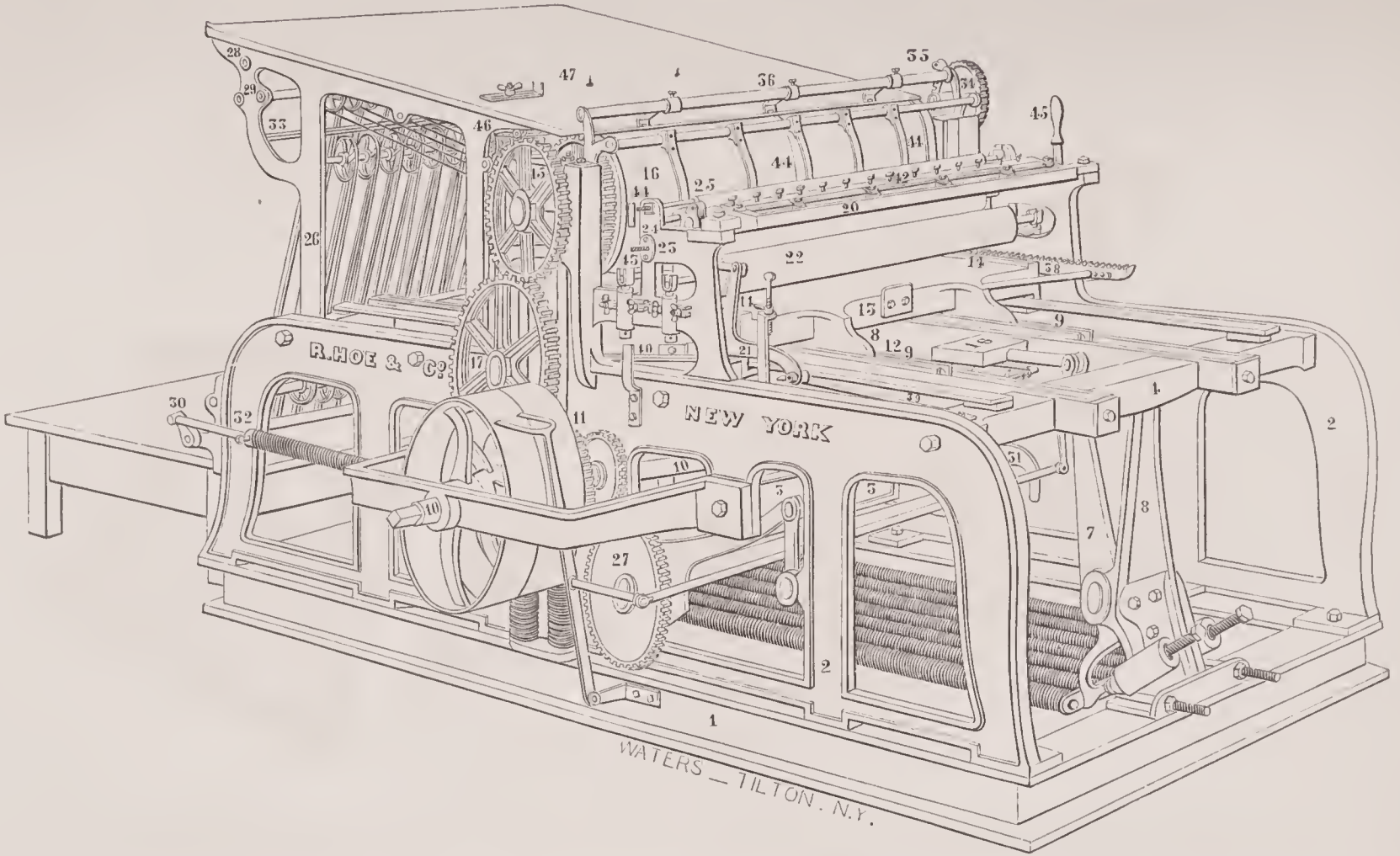


Diagram of Patent Improved Double or Single Three Revolution SMALL Cylinder Printing Machine.

To illustrate Directions for Puting Up, (see page 36).

Directions for Putting Up the Patent Improved Double or Single Three Revolution Small Cylinder Printing Machine.

(See cut, page 35.)

The several parts are taken and put together in the following order; the numbers are all to be found on the accompanying drawing:

1..The bed plate is laid down level on the floor, and if on a lower story or ground floor, a frame of 8 by 10 inch timber, as shown at figure B, framed and bolted with ¾ inch bolts, will require to be bedded on a few courses of brickwork, well laid in mortar as a foundation; the frame should be made 4 inches wider and longer than the bed plate.

2..The side frames, placed according to the marks indented on the metal, which must all be made to correspond.

3..The bridge beam between side frames.

4..The ribs are now carried in and rested on the snugs, inside of frames; the bolts at one end only put through the side frames, to allow the ribs to be carried up about one inch at the other end, so as to let in the small wrought iron columns under the ribs and on top of bridge beam. All the bolts can now be put in and secured.

5..Spring stands also put in under ribs at each end of press.

6..Two set of spiral springs, laid on bed plate between stands.

7..Spring lever, set in spring stands.

8..Slot hanger, which is bolted to the under side of ribs, not visible on drawing.

9..Roller frames laid in channels of ribs.

10..Bevel rack pinion, with universal joint shaft, which is put through the hanger till the brass collar lies in the slot, the driving shaft passed through from the inside of frame, and the universal joint coupled together.

11..The outside gear is now keyed on the driving shaft—first, the impression pinion, and second, the outside driving wheel; also the driving pulley is keyed on, and the loose pulley slipped on, then the outside hanger and bolted fast.

12..Bevel rack, to be bolted to the underside of No. 13.

13..The bed with the rack secured, is laid on the roller frames which lie on the ribs, the teeth of the rack coming in contact with the rack pinion, so that the small rollers at the end of the rack will come in the blank tooth of the pinion.

14..Bearers on bed, adjustable by thumb-screws.

15..Cylinder bearings, adjustable by set nuts.

16..Cylinder, with wheel and finger motion complete.

17..The intermediate gear or wheel work.

18..Buffer boxes attached to top of spring levers.

19..Two brackets from inside of ribs with slides for buffer boxes.

20..Ink Fountain.

21..Lever for working fountain roller; on the same centre is a similar lever for moving the stretcher bar with drop roller.

22..Composition rollers in adjustable bearings.

23..Vibrating distributing roller, with pinion and intermediate pinion in gear, with the rack on the side of the bed; one end is screwed in a nut secured in the frame, and as it revolves it screws forward and unscrews on the return of the bed.

24..Roller, covered with cloth.

25..Small iron vibrating and receiving, or riding roller.

26..Support for feed board.

27..Impression wheel driving from pinion on driving shaft No. 10, and works the impression cam on inside of frame, giving action to the toggle arms and beam extending across the press, and supported springs on the bottom of the rods which by spiral pass through and support the cylinder and boxes No. 15. The cam must be set so as to slack the impression as soon as the sheet is printed.

28..Rod with three guide pulley arms on it, and weight.

29..Bracket for delivering roller and tape pulleys.

30..Bracket for fly.

31..Cam for raising fly frame.

32..Adjustable spring and rod for fly, which can be set so as to counteract the resistance of the paper to the atmosphere, in such a manner as to lay the sheet easily on the table.

33..Rest for fly when raised.

34..Cam wheel, and arm for working the fingers.

35..Bracket for feed guides and for hanging the sheet steel spring bands, to conduct the paper round the cylinder.

36..Receiving feed guides, worked by a small crank on the end of the rods, moved by an arm having a small roller on the end, rolling on a cam on the shaft of cylinder.

37..A guide shield to arm working No. 36, not visible.

38..A rack on side of bed for working inking rollers; there are also inclined planes attached to bed for working drop roller, and for depressing arm No. 21.

39..Steel spring to raise arm No. 21, bolted on frame.

40..Springs to bear on the end of upper distributing roller; small steel centers are put in each end in contact with the spring, which serves to return the action.

41..Stud for slot of connecting rod, working on fly crank by cam No. 31, on the opposite side of press.

42..Ductor, with set screws to regulate the supply of ink from fountain.

43..Blanket stretched round impression part of cylinder.

44..Three tapes which pass around cylinder, over the tape pulley around the delivery roller, and are guided by guide pulleys on No. 28.

45..The lever handle for shifting. The belt is now adjusted and the whole machine is complete with the exception of

46..The registering apparatus, which is attached by two small bolts under the top of the support for feed board, close to the cylinder.

47..To find the place on the feed board for the points of the register to work through, you must have the small points placed in the chase, then place a sheet on the feed board, and close the fingers on it, and mark aronnd the end and sides of the fingers with a pencil and run the sheet through the press—lay the sheet on the board—then turn the press so that the fingers may just close on the sheet exactly on the pencil marks without drawing it ahead, and the punctures made on the paper by the small points in the chase will be the place for making the holes in the feed board.

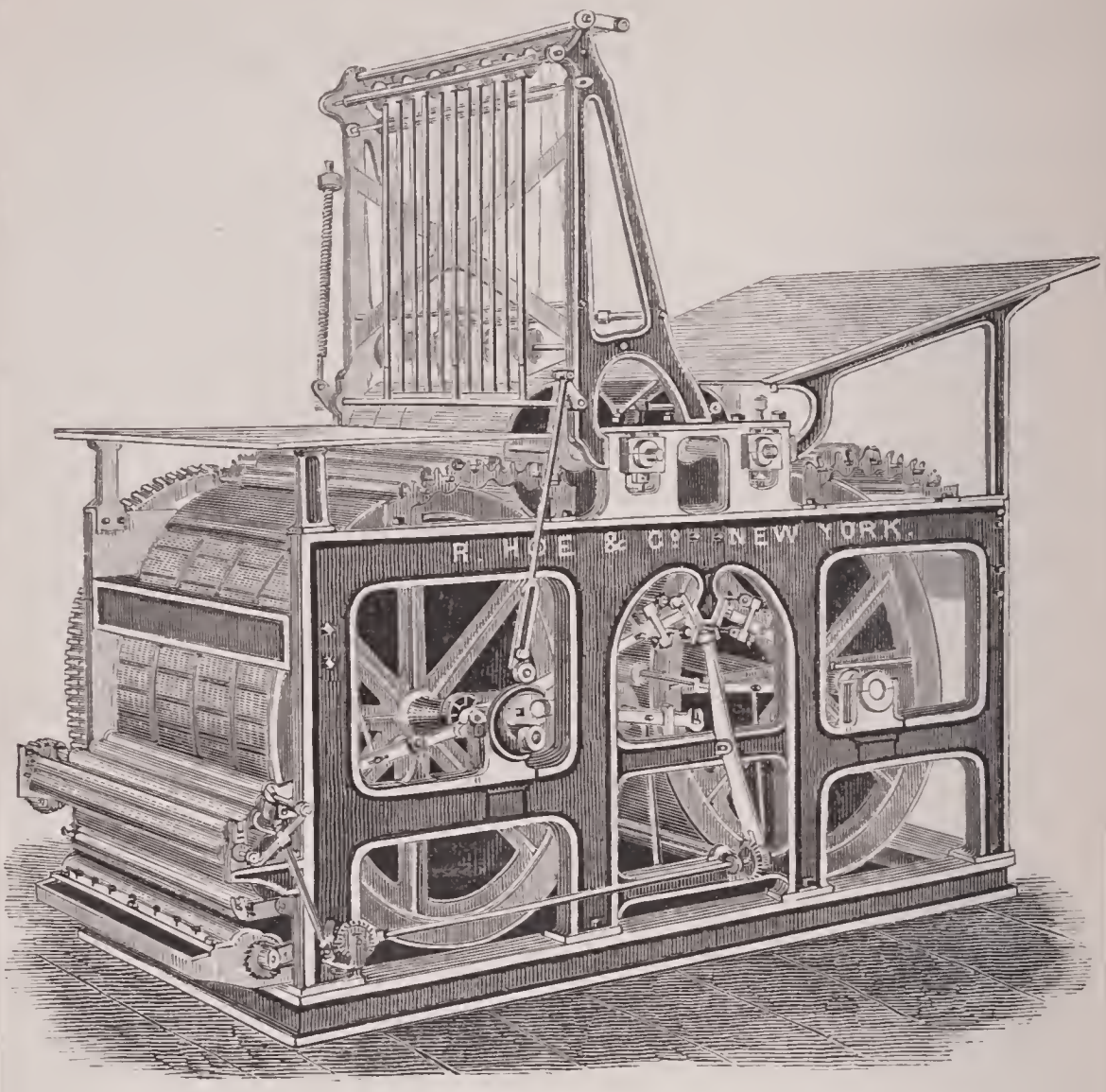
Directions for Making and Preserving Composition Rollers.

For *Cylinder Press Rollers*, No. 1 × glue is sufficient for ordinary purposes, and will be found to make as durable rollers as higher priced glues.

Place the glue in a bucket, or pan, and cover it with water; let it stand half an hour, or until about half penetrated with water, (care should be used not to let it soak too long,) then pour it off and let it remain until it is soft. Put it in the kettle and cook it until thoroughly melted. If too thick, add a little water until it becomes of proper consistency. The molasses may then be added, and well mixed with the glue by frequent stirring. When properly prepared, the composition does not require boiliug more than an hour. Too much boiling candies the molasses, and the roller consequently will be found to lose its suction much sooner. In proportioning the material much depends upon the weather and temperature of the place in which the rollers are to be used. Eight pounds of glue to one gallon of sugar-house molasses, or syrup, is a very good proportion for summer, and four pounds of glue to one gallon of molasses for winter use.

For *Hand Press Rollers* use more molasses, as they are not snbject to so much hard usage as *cylinder press* rollers, and do not require to be as strong; for the more molasses that can be used the better is the roller. Before pouring a roller, the mould should be perfectly clean, and well oiled with a swab, but not to excess. as too much oil makes the face of the roller seamy and ragged.

Rollers should not be washed immediately after use, but should be put away with the ink on them, as it protects the surface from the action of the air. When washed and exposed to the atmosphere for any length of time they become dry and skinny. They should be washed about half an hour before using them. In cleaning a *new* roller, a little oil rubbed over it will loosen the ink, and it should be scraped clean with the back of a case knife. It shonld be cleaned in this way for about one week, when *lye* may be used. New rollers are often spoiled by washing them too soon with lye. Camphene may be substituted for oil. but owing to its combustible nature it is objectionable, as accidents may arise from its use.



R. HOE & CO'S

Type Revolving, Rotary, Book, Perfecting Press.

This is a new style of press, and is intended for Book Work, and, as its name indicates, is on the rotary principle, (that is, the forms are placed on the periphery of two large revolving cylinders). This system admits of a greater amount of distribution of the ink—a greater number of inking rollers, (six or more for each form) and a greater speed in printing than any other.

It will do the work of two ordinary presses, as the sheets are "Perfected," or printed on both sides, before leaving the press; it also dispenses with the registering apparatus, so that only one feed-boy is required for the largest size sheet, and thus effects a great saving of labor.

It will print in a superior manner from 1500 to 2500 perfected sheets per hour, the only limit to its speed being the capability of the boy to supply the sheets. It is equally applicable to Type, Stereotype, or Cut work, and is furnished with all the recent improvements, as bearers, sheet-flying apparatus, &c., &c. It occupies 11 feet in length by 5 feet in width, and 9½ feet in height.

R. HOE & CO'S

Patent Single LARGE Cylinder Printing Machine.

(See page 40.)

THIS Machine is particularly adapted to Book, Job and fine Newspaper work. It has a perfect registering apparatus and sheet-flyer: also adjustable iron bearers, so that stereotype may be worked with the same facility and beauty as type forms. One boy is required to lay on the sheets, and the press may be driven by man or steam power. It will print from one thousand to two thousand impressions in an hour, according to the size of the press and the quality of the work desired. We now furnish vulcanized india rubber impression cloth for these presses, and as it is not readily indented by the type, forms of different sizes may be worked without any change of blankets. Overlays are conveniently made on the rubber, and may be removed by a wet sponge. To prevent noise, buffers are applied, as in the double cylinder machine.

The smaller sizes are found exceedingly useful for Jobbing of all kinds, from the finest work in colors to the cheapest programme or hand-bills. Script circulars, bill-heads, checks and blanks are printed by them with the greatest despatch, uniformity and neatness. By their rapid execution a job of 500 can be made ready and printed in the time usually required to get the form ready on a bed and platen machine press. They may be seen in operation in all the principal offices in New-York and other cities.

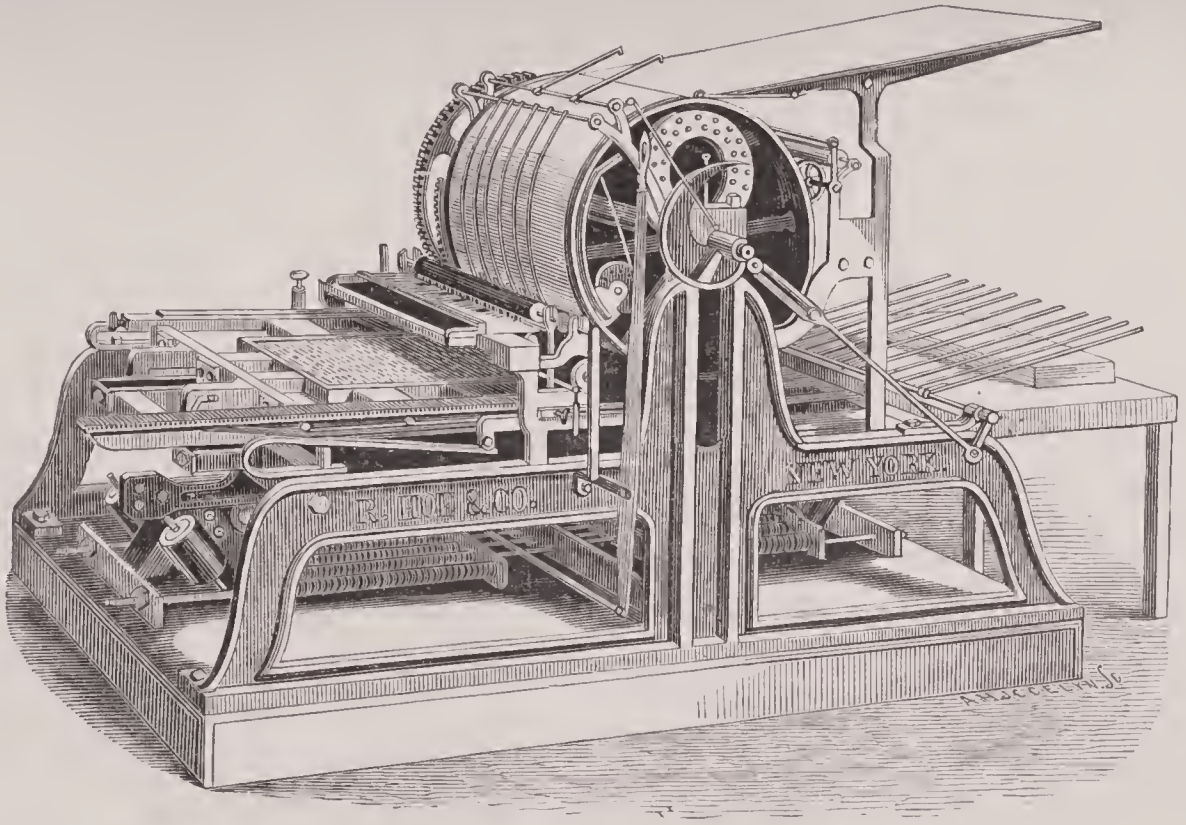
SIZES AND PRICES.

No. 1, Bed 19 × 23½ inches	$960	No. 6. Bed 31 × 50 inches	$2,250
2, " 23 × 28½ "	1,275	7. " 34 × 52 "	2,400
3, " 25 × 33 "	1,490	8. " 40 × 54 "	2,550
4, " 28½ × 41 "	1,900	9. " 40 × 57 "	2,650
5, " 31 × 46 "	2,100		

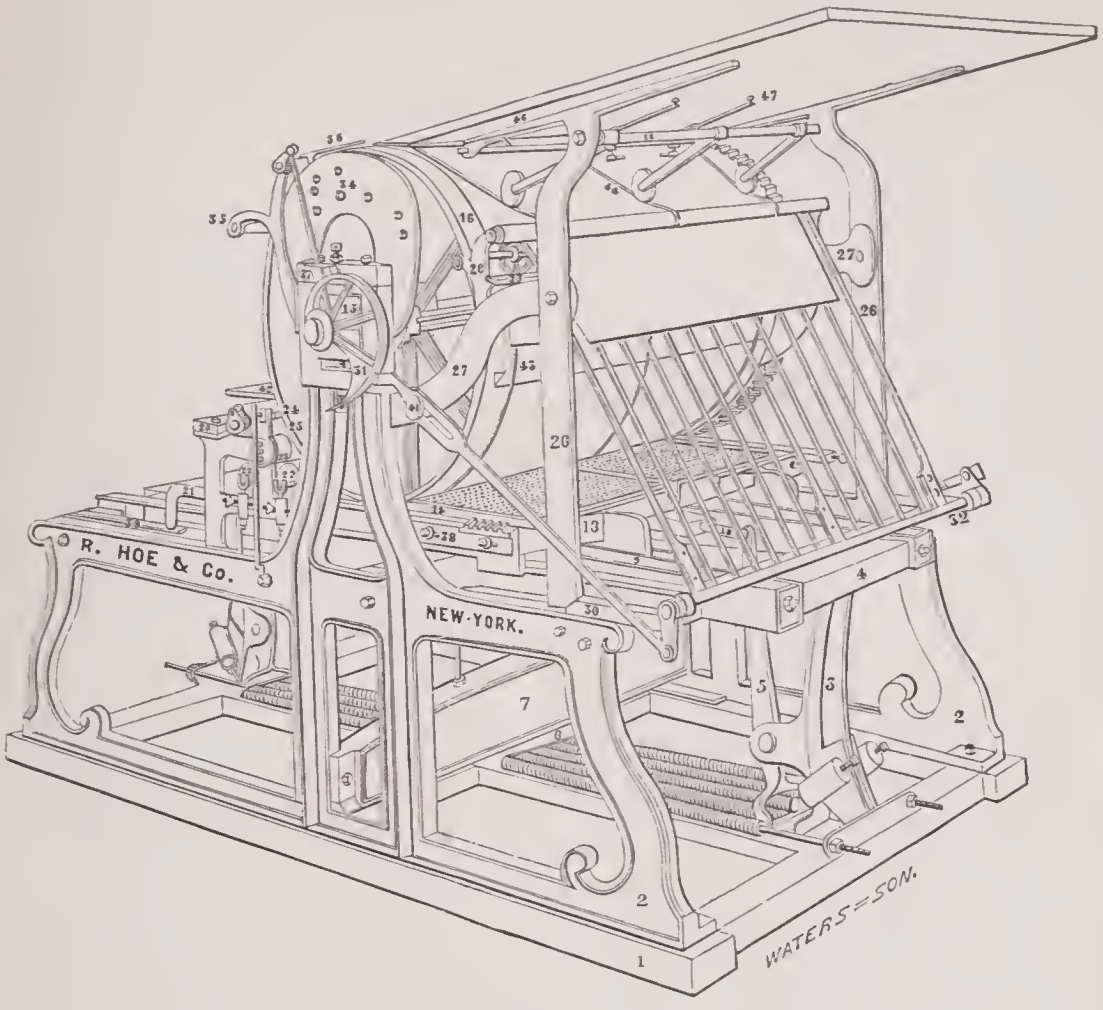
Boxing and Carting, $20 to $50. Extra Fountain from $35 to $65.
Fly Wheel and Stand, small size, $50. Fly Wheel and Stand, large size, $75.
Each Machine is furnished with Roller Moulds, two sets of Roller Stocks, Blankets, Band, Counter Shaft, two Hangers and Pulley.
If ordered with Inking Apparatus to work four rollers, $150 extra.

Sizes and Capacities of the Single Large Cylinder Printing Machine.

SINGLE LARGE CYLINDER PRESS.	Size of matter Inked by One Roller.	Size of matter Inked by Two Rollers.	Size of matter Inked by Three Rollers.	Size of matter Inked by Four Rollers.	Size of Foundation Plate.	Space required to work Press with sheet flyer.	Height from floor to highest point of sheet flyer.	Weight Boxed.
No. 1.....19 ×23½	18 in.	14 in.			34×56 in.	56×144 in.	54 in.	3,285 lbs.
" 2.....23 ×28½	20 "	18 "			41×76 "	65×152 "	63 "	5,143 "
" 3.....25 ×33	23 "	21 "			46×89 "	70×145 "	65 "	6,772 "
" 4.....28½×41	26 "	24 "			53×90 "	77×153 "	73 "	8,943 "
" 5.....46 ×31	30 "	27 "	25 in.	23 in.	60×108 "	84×175 "	84 "	10,410 "
" 6.....31 ×50	30 "	27 "	25 "	23 "	63×108 "	87×175 "	84 "	10,811 "
" 7.....34 ×52	32 "	31 "	30 "	29 "	65×106 "	89×189 "	90 "	13,574 "
" 8.....54 ×40	32½ "	32 "	30½ "	29 "	63×106 "	91×189 "	90 "	14,796 "
" 9.....54 ×40	32½ "	32 "	30½ "	29 "	68×106 "	94×189 "	90 "	15,650 "



R. Hoe & Co's Patent Single LARGE Cylinder Printing Machine.



Directions for Putting Up the Patent Improved Single Large Cylinder Printing Machine.

The several parts are taken and put together in the following order:

1..Bed Plate,
2..Side Frames,
3..The Spring Stands,
4..The Ribs.

NOTE.—Take either side frame and bolt it in its place, with the bolts not quite screwed up; secure both spring stands and side; carry in the ribs and let them rest on the spring stands; bring up the other side frame, then secure and make fast all the bolts.

5..Spring Levers set in spring stands.

6..Two sets of Spiral Springs, laid on bed plate between stands.

7..Bridge Beam, with two column supports to ribs.

8..Hanger, which is bolted to the under side of ribs.

9..Roller Frames, laid in channels of ribs.

10..Rack Pinion, with universal joint shaft, which is put through the hanger, till the brass collar lies in the slot; the driving shaft passed through from outside of frame and the universal joint coupled.

11..The outside pinion is now keyed on the driving shaft, also the driving pulley is keyed on, and the loose pulley slipped on, then the outside hanger is bolted to secure the end of driving shaft.

12..Bevel Back, to be bolted to the underside of No. 13.

13..The Bed, with rack secured, is laid on the roller frames, which lie in the ribs, the teeth of the rack coming in contact with the rack pinion, so that the small rollers at the end of the rack will come in the blank tooth of the pinion.

14..Bearers on bed adjustable by thumb screws.

15..Cylinder bearings adjustable by set screws.

16..Cylinder, with wheel and finger motion complete.

17..Caps to cylinder bearings.

18..Buffer Boxes attached to top of spring levers.

19..Two brackets from inside of ribs with slides for buffer boxes.

20..Ink Fountain.

21..Lever for working fountain roller; on the same center is a similar lever for moving the drop roller, or roller that takes ink from the fountain, and deposits it on the distributing rollers.

22..Composition rollers in adjustable bearings.
23..Distributing roller, with a pinion and intermediate pinion in gear, with a rack on the side of the bed; one end is screwed in a nut secured in the frame, and as it rolls, it screws forward, and unscrews on the return of the bed.
24..Small iron vibrating Roller.
25..Roller, covered with cloth.
26..Support for feed board.
27..Brace for feed board.
28..Stay Rod, with three tape guide pulley-arms on it.
29..Brackets for delivering roller and tape pulleys.
30..Brackets for fly.
31..Cam for raising fly frame.
32..Adjustable Spring and Rod for fly, which can be set so as to counteract the resistance of the paper to the atmosphere, in such manner as to lay the sheet easily on the table.
33..Rest for fly when raised.
34..Cam plate for working fingers.
35..Branch bracket for feed guides and for hanging sheet steel spring bands, to conduct the paper round the cylinder.
36..Receiving feed guides, worked by a small crank on the end of the rod, moved by an arm having a small roller on the end, rolling on a cam on the main shaft of cylinder.
37..A guide shield to arm working No. 36.
38..A guage rack working into a segment on the cylinder. When this rack is put in connection with the cylinder, it must be in gear with the segment, at the end furthest from the side of the bed, that is, where the teeth fill the spaces, and in such a manner as to divide the play in the outside wheels.
39..A spring to raise lever No. 21.
40..Springs to bear on the end of the upper distributing roller spindle; small steel centers are put in each end, which come in contact with the spring, which serves to return the action.
41..Stud for slot of connecting rod, working on fly crank by cam No. 31.
42..Cover to ink fountain.
43..Blanket stretched around impression part of cylinder.
44..Three tapes which pass around cylinder over the tape pulleys and around the delivery roller, and are guided by the guide pulleys on the arms on stay rod No. 28.
45..The lever handle for shifting; the belt is now adjusted, and the whole machine is completed with the exception of
46..The registering apparatus, which is attached by two small bolts to the top of the support for feed board, close to the cylinder.
47..To find the place on the feed board for the points of the register to work through, you must have the small points placed in the chase, then place a sheet on the feed board, close down to the feed guides, and mark with a pencil around it on the feed board—then run the sheet through the press, and lay it on the feed board again exactly by the marks of pencil, and the puncture made on the paper by the small points in the chase, will be the place for making the holes in the feed board.

Hints on Making Ready for Cylinder Presses.

MAKE clean the bed of the press and the impression segment of the cylinder. Adjust the bearers a trifle above ordinary type height. See that the impression screws have an even bearing on the journals, and that the cylinder fairly meets the bearers. Select a suitable tympan or impression surface.

The tympan may be the India-rubber cloth, which is furnished with the press—a thick woolen lapping cloth or blanket—several sheets of thick calendered printing paper, or one or more smooth and hard paste-boards. Each of these materials have merits not to be found in any other. Upon the proper selection of the tympan the press-work in great measure depends, and the pressman should be thus guided in making choice.

A paste-board tympan is most suitable for wood-cuts, for perfectly new type, and for the best kinds of press-work. It is not suitable for miscellaneous work, nor for heavy forms, nor mixed old and new type. If the overlaying is properly executed, a paste-board tympan will enable the pressman to show a sharper edge and a more delicate impression of the type, than can be possible with any other. And it will wear the type less than any other. But it will require a very tedious and careful making ready, or it will prove very destructive to type.

A woolen blanket is best adapted for old stereotype plates, for very old type, which has been rounded on the edges, for posters with large wood type, and for all common work which requires a clear but dull impression. For such work a woolen blanket will enable the pressman to make ready a form more quickly than with any other material; but it is injurious to new type, and incapable of producing a fine and sharp impression.

Thick paper is much used for book-work. It also answers well for script circulars and leaded forms. It will not answer so well for mixed old and new type, nor for table-work, with unequal heights of brass rule, nor for mixed large and small type. It will prove most serviceable for the average of light and fine press-work.

The India Rubber Cloth combines many good qualities not found in other tympans:—it has something of the density of the paste-board, the hardness and evenness of paper, and the flexibility of the blanket, combined with an elasticity peculiarly its own. It will compass a greater variety of work than any other: posters, script circulars, news and book forms, stereotype plates, and old or new type, can all be well printed with an India-rubber blanket. When it is intended to make one tympan, answer for all kinds of work, the India-rubber blanket will be found decidedly superior to all others. But when very extra press-work is wanted, the tympan must be specially adapted to the form of type.

There are forms for which none of these tympans are specially suitable. For such cases careful pressmen combine two or more together—as Welsh flannel over rubber, or thin rubber over paste-board or under paper. These, however, are exceptional cases, and are only thus combined when very good press-work is wanted from imperfect materials. Careful observation of the *quality* of the impression, given by each style of tympan, will teach a pressman how to combine to the best advantage. As it requires experience and discrimination, an arbitrary rule cannot be given.

Whatever may be the material selected, the tympan must be stretched very tightly over the cylinder. All labor in overlaying is but thrown away, if this is not carefully attended to. A rubber or woolen blanket can be secured at one end of the cylinder by small hooks projecting inward, while it may be laced tightly with saddler's thread at the other end; or, by sewing on that end of the blanket a piece of canvas, it may be wound tightly around the reel, and kept secure by the pawl and ratchet.

But paper and paste-board require a different process, viz.: Take a piece of nonpareil cherry reglet of the full length of the cylinder. Trim down the paper or paste-board to the width of the bed between the bearers, but leave it a little longer than the impression segment of the cylinder. Then crease the pasteboard at a uniform distance of half an inch from the narrower end, and lay this creased part on the flat edge of the impression segment of the cylinder, under the grippers. Put the reglet over this, and bring down the clamps hard on the reglet so as to bind all securely. When this is done, a thin web of muslin may be stretched over the whole in the same way in which a blanket is laid on and rolled up tightly, which will prevent any slipping of the board or of the overlays pasted on it.

A large poster, or newspaper form, or any large form with old type will require a soft roller with much suction. Book work, wood cuts, or fine job work will require a harder roller, with very smooth, elastic and clinging surface. Colored Inks, are best printed with a still harder roller, and with much less suction. All rollers should be perfectly clean, and free from cracks or holes. The suitableness of these rollers cannot well be explained by words: such a knowledge will be best acquired by observation and experience. It may, however, be necessary to state that one roller will not answer for all styles of presswork: the quality of the work, the size and wear of the type, and the speed of the press must control the pressman in his choice.

Posters, with large wood type, require a semi-fluid ink but not surcharged with oil. Ordinary news work requires a better grade, more tacky and finely ground. Good book-work should have a stiffer bodied ink, soft, smooth, and with little oil. Job ink, which is made expressly for presswork on dry paper, should be used only for such work. Book and job inks are not convertable—an ink for wet paper will not work well on dry paper, and vice versa. Very fine presswork, such as wood-cuts, or letter-press upon enamelled paper calls for an ink impalpably fine, very stiff, of brilliant color, and nearly or absolutely free from oil. Parsons & Fletchers' Wood-cut Ink will be found well adapted for such work.

Every job office should keep four grades of ink: News, Book, Job and Wood-cut. They can be compounded (if no ink manufacturer is near) with each other, or reduced with varnish to suit any form. Good presswork is impossible without good inks.

Charge the Ink Fountain with the ink selected, and keep it well covered, to protect it from paper dust. Turn down the screws, and cut off all the ink evenly. When the form is ready, turn on the ink cautiously, and wait for ten or twelve impressions before again altering the screws. For small forms and short numbers of any piece of press-work in colored ink or extra ink, a fountain is not necessary. The ink may be applied with a brayer or palette knife.

The adjustment of the margin is the next process. Although type can be printed from any quarter of the bed, it will be found most judicious to lay all forms close to the back part of the bed, and equi-distant between the bearers. This will secure a good impression, give a fair average margin to every form and allow the full use of the bed for a large form, without resetting the cylinder. The bed and cylinder, travel together, and the grippers, which bring down the sheet to the form, should barely lap over the back part of the bed. So long as the toothed cylinder wheel, and the short toothed rack on the side of the bed, remain undisturbed, the grippers will always pass over the bed in exactly the same place. When the grippers are in this position (slightly lapping over the back of the bed) take measurement of the distance between the back edge of the bed, and the point of one of the nearest grippers.

Witb a piece of reglet cut a guage, exactly corresponding to this measurement. Let no form he laid upon the press, nntil the distance between the type and the edge of the chase tallies with the guage. This will prevent the grippers from closing on the form, and crushing the type. If tbe chase will not admit of so wide a margin, or if an extra margin is wanted on the sheet, put a piece of furniture of the extra width, hehind the chase. The margin can thus be increased or diminished at pleasnre.

A book form may be locked up in a chase so large, with the type so far from the edge of the chase, that the grippers will bring down the sheet in such a position that it will be printed with the margin all on one side. To remedy this, the cylinder must be reset. Proceed thus: Remove the screw and washer and draw the intermediate wheel out of gear, loosen screws in the guage rack, then turn the cylinder to the point required, connect the intermediate wheel, adjust the guage rack, and screw up tight.

The press having been adjusted, next examine the form to be printed. Not only see that it is gauged correctly, but also see that it is not locked up too tightly—that chase, quoins, letter and furniture are all level, and lay flat upon the bed. If the form springs, the quoins must be slackened; if this loosens the type too much, the justification should be amended. Make clean the type by rubbing it over with a dry brush. The rollers are often made foul, and the color of the ink changed by dust and particles of dirt clinging to the type.

Fasten the form so securely on the bed that it will not be moved by the action of the cylinder or the rollers. Take a proof on its own paper, nsing very little ink. Proceed to adjust the drop guides so as to bring the sheet exactly in the rigbt position. Push out the iron tongnes at the edge of the feed-board, and at equal distances from each otber, so that they will equally sustain the paper. Slide the drop guides along the rod until they fall squarely over the tongues. Set the side guide so that it will give a truc margin in length to the sheet to be printed. Adjust the grippers, so that they will seize the sbeet at proper intervals, making the margin exactly even by lengthening or shortening the drop gnides. Tben take a clean proof *on its own paper*, exactly in the right position, before making ready, when it may be sbown to the reader. It frequently happens that an error in the margin, or an imperfeetion in tbe register is thus noticed, and its timely discovery and correction before overlaying will save much time and trouble. A readable proof may be taken before overlaying, by running through a sheet or two of proof paper. *Make Register* if it is a book form *before underlaying.*

When everytbing bas been found correct, tben proceed to regulate the impression. If thc type is fair the proof should show a decently uniform impression. But if the form is large, or if it contains old and new or large and small type, then the proof will sbow an uneven impression. To rectify this inequality pressmen use many expedients.

1. By lowering the bearers and putting on more impression. This, of itself, is a very poor way; for it wears down new type, in order to show the face of the old, and invariably produces tbick and coarse press-work.

2. By raising the low type to a proper height with thicknesses of paper under them, wbich is called Underlaying.

3. By giving additional thickness to the tympan, over every part of the form which shows a weak impression, which is called Overlaying.

It is very rare that any one of these modes will prove sufficient; all should be nsed in conjnnction. When the larger part of the proof-sheet shows a weak impression, almost approaching illegibility, then more impression should be added. When one side of tbe proof-sheet shows a weak impression, while that on the other side is full and clear, then more impression should be given to the paler side. Tbe impression should be made decently uniform before any attempt at overlaying or underlaying. But the bearers shonld follow the impression screws, both being raised and lowered together, in order to secnre the type from the nnimpeded force of the impression cylinder. Not only shonld the bearers be of even height, but the cylinder shaft should always revolve on a true level. If the impression screws are carelessly nsed. and the bearers are rashly raised and lowered, this even bearing will soon be lost; the difficulty of obtaining a good impression will bc mnch increased, and the press will receive a serious injury. For thc aame reason, the bearers should never be packed (by the addition of cards, as is usual on a hand press,) for it strains the cylinder and all its bearings with an irregular resistance. The bearers shonld be tampered with even less than the impression screws. When the impression screws are so set that the cylinder gives a fair uniform impression, tbey have done all that can be expected, and nothing more should be attempted by them. Sometimes proof may show that one cut, or a line of type, or a set of brass rules, are higher than any other material in the form. But the impression should be set regardless of this; it will be found quicker and neater to rednce the impression on one or two such high lines, by cutting *out* the tympan sheet over them, than it would be to underlay, and bring up all other types to sucb an irregular height. Pitcb the impression so that it will face the larger portion of the type, and make the less conform to the greater. Those parts which are high must be cnt ont of the tympan, and those which are low should be raised by underlays, and all inequalities smoothed by overlaya.

When any part of the form is very low, it will not answer to attempt facing it with overlays; it must be bronght np to meet the inking rollers as well as the impression cylinder. When the proof shows low type, cut out the impression of it, raise the form, and paste it over the feet of the letter. If some types are high, and some are low, make proper distinction, and carefully avoid increasing the height of any type or rule which seems to have a full impression. Pursue the same course when a marked depression appears in the center, or a dwindling impression at thc edges. Cut out that section which is light, and affix it to the defective part. If tbe impression dwindles in any part, the nnderlays must be cnt of irregular tbickness to suit the tapering off of the impression. Cut out an underlay from the edge where the impression begins to fade; then cut another of smaller size whcre it is ntterly illegible; paste one over the other, laying tbem carefully in their proper positions, and then paste them all on the bottom of the form, where it is needed, taking carc to lay the smallest underlay nearest the bed. This will restore the type to a proper level, and the next proof should show a uniform impressiou. The same plan will answer for a low corner. Use as little paste as possible, thin and free from lumps. Be careful that the underlays are laid on smoothly without fold or wrinkle. Cut all underlays from a proof, for the proof serves as a gnide both in cutting and in affixing to tbe form.

Underlaying should not be done to any great extent upon a cylinder press. It is a valuable means of bringing up an old line of type, a hollow or a low corner. The nnderlays of any *type* form should not constitute more than one-fourth of tbe surfaee; if more than this is attempted, they will rarely ever fail to work np tbc quadrats and furniture. The action of the quickly moving cylinder npon a form of type underlaid with yielding paper, must create a spring and a rocking of all the materials in the chase.

Of all materials, old stereotype plates need underlays most, as they are usually very irregular in height. Thin card or paste-board will be found preferable to paper for the underlaying of plates secured on wood bodies. When the plates are on patent blocks always underlay between the plate and the block. Always cut the underlay for a plate less in size than the faint impression wonld seem to require. This will allow for the spring of the plate. If it is cut of full size, the next impression will disappoint the pressman by being much harder at the edges tban he intended. Never attempt to build up a type form to a proper impression, entirely or chiefly, by underlaying.

Underlays should be put under all large and bold-faced types, when nsed with much smaller types—so as to raise them above the level of the others. This is needed to give it closer rolling, extra supply of ink, and that extra force of impression to transfer the ink to paper which all large types require.

When the type has been so levelled by underlays that all parts receive proper bearing from the inking rollers, and when the cylinder has a corresponding even impression, then overlaying may be commenced. For ordinary news, posters, or job work, overlaying may be entirely unnecessary; the tapes and fly may be set, and the printing of the form may proceed without further delay. But fine presswork cannot be done without overlays. Underlays are chiefly valuable for securing an even impression, while overlays are indispensable for giving delicacy and finish to that impression.

To overlay a form properly the tympan should be covered with a sheet of a thin smooth and hard paper, stretched tightly. Then take a pale impression on the tympan sheet, and also run through the press two or three proofs on thin and hard paper. Examine the proofs carefully, on both face and back. If any brass rules or letters appear too high, cut them out of the tympan sheet in one or two thicknesses as their varying height may require. Go over the whole proof examining every line carefully, and by cutting out reduce the impression of all projecting letters to a uniform standard. For this, as for all other work on overlays, use a very sharp knife with a thin point, and cut on a smooth surface, so that there will be no dragged or torn edge to the cut.

The next step should be to raise the impression of those parts of the form when the type appears dull or weak. Cut out carefully, and paste the overlays over the tympan smoothly. Overlays are worse than useless if they are not laid on firmly and smoothly, as the slightest bagginess will cause slur or mackle. If, by accident, the tympan sheets or overlays should bag or wrinkle, tear them off, and commence anew.

Cut out and overlay the more prominent parts first. Then try another impression, and from that cut out new overlays for minor defects. Thus proceed until a perfectly smooth and even impression is obtained.

With common work it will be sufficient to cut overlays in masses, as pages or parts of pages, but with fine work every line and letter needs examination, and letters and parts of single letters are often overlayed by careful pressmen. When the pressman is expert, at making ready, it is not necessary that he should take a new impression with every successive set of overlays. Many pressmen take a dozen proofs of a form on different styles of paper; and proceed to cut out and overlay on one of the proofs—and finally paste this proof on the tympan. But this boldness and precision can be acquired only by long practice. It is better for the young pressman to feel his way step by step.

The Impression.—A diversity of opinion exists among good printers as to the proper force of the impression; by some a heavy and solid indention of the paper is considered necessary; while others insist that an impression which does not indent the paper is preferable. But the indention of the paper is no test of the force of the impression. A light impression against a woolen blanket will show more forcibly than a strong impression against a paper or a paste-board tympan.

Type is worn out, not so much by the *direct* impression of the platen or cylinder, on the flat face of a form, as by a grinding or rounding impression on the edges of the type, caused by the forcing of the tympan between the lines, and around the corners of every letter. Every font of worn-out type, whether from cylinder or platen press, has suffered less from a reduction in height than from a rounding of the edges. When the type is new and the tympan hard and smooth, the impression can be made so flat that the type will not round at the edges, and the impression will not show on the paper. But this cannot be done with old type, or with a soft tympan: the impression must be regulated to suit the tympan. On fine work a rounding impression should be avoided, as it not only destroys type, but also thickens the hair line, and wears off the ceriphs.

It is not sufficient that the paper should barely meet the type; there must be sufficient force in the impression to transfer the ink from type to paper. If there is not sufficient impression it will be necessary to carry much ink on the rollers, and this produces two evils:—the type is clogged with ink, and the form becomes foul; too much ink is transferred to the paper, which smears and sets off, for want of force sufficient to impress it in the paper. Distinction must be made between a *light* and *weak* impression, and a *firm* and *even* impression. The latter should be secured, even if the paper is indented, though that is not always necessary. But a form of old type, a poster, or other solid form must have a *heavy* impression, or else a very tedious and careful making ready.

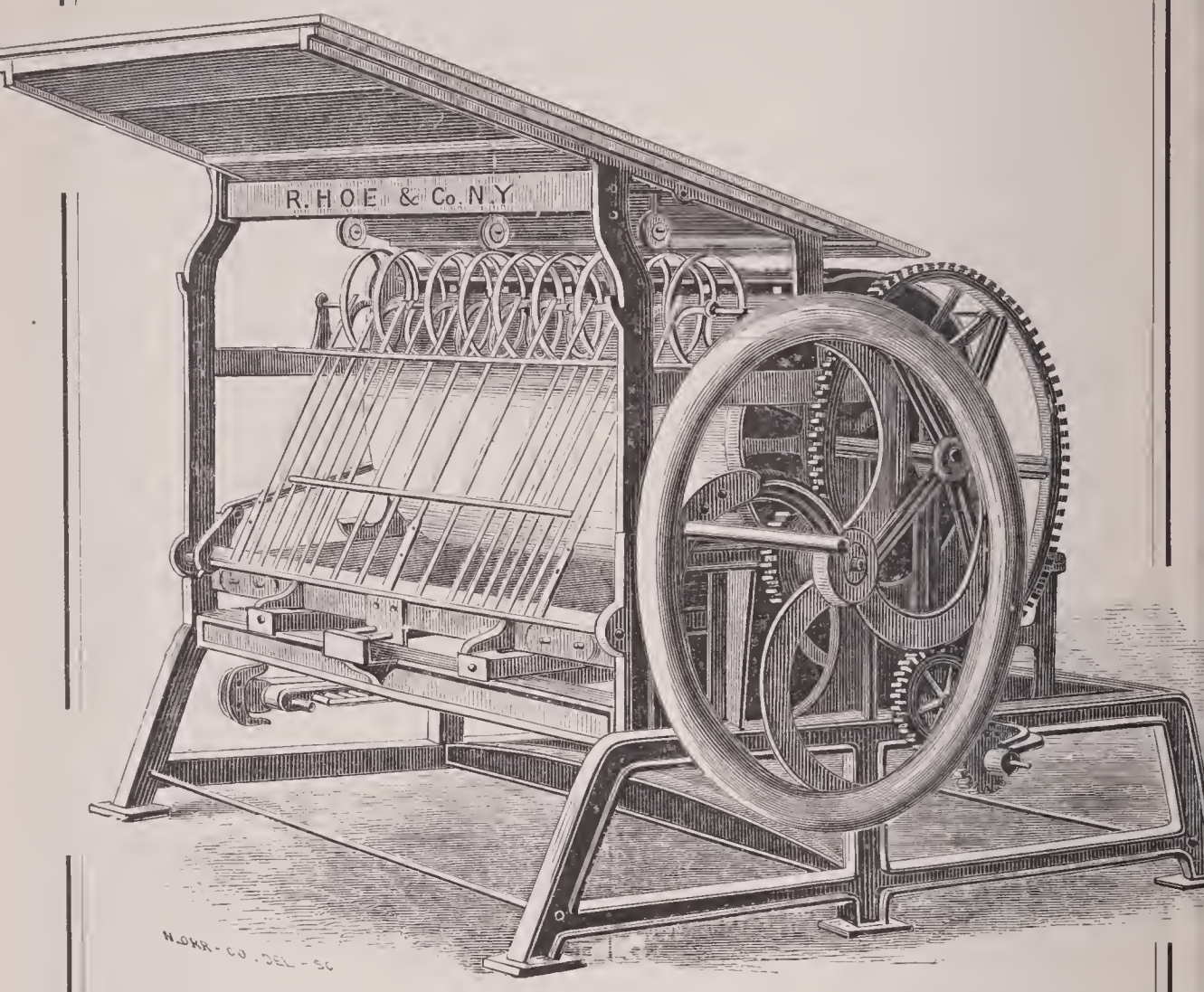
The making ready of wood-cuts is a branch of presswork by itself, requiring minute instructions and long practice. It will be sufficient to say that the pressman must follow the lead of the engraver in cutting his overlays. Where the lines are thin, wide and sharp, then they should be cut out of the tympan sheet; where they are close and solid, then overlays should be pasted on—the number of overlays being gradated by the blackness or lightness of each part of the cut. These will suffice for plain cuts, but the management of perspective in a landscape, the subduing of a fore ground, the receding of shades, the distinction between sky, clouds and water, are all materially effected by the slightest overlay. Wood-cuts need *natural* as well as acquired skill from the pressman.

When the overlays have been securely fastened, draw over the tympan a piece of French copying paper, and paste tightly. Some pressmen nicely graduate a decreasing or increasing boldness by *inlaying* between smooth sheets.

To set New Tapes.—Pass the tape around and close to the cylinder. Lap it over one of the tape pulleys, and then pass it around the small guide pulley on the shaft above. To increase its tightness throw up the guide pulley from the shaft, and set the binding screw more tightly. All these pulleys are moveable on their shafts, and distance between them may be altered at pleasure. Let the tapes rest upon the outer margin of the sheet, and see that the overlays on the tympan over which the tapes pass are of equal thickness; if not of equal thickness the sheet will wrinkle.

To set the Fly.—Run through a sheet of the paper to be printed, and let it run down the fly, so far that it is barely held by the fly pulleys. Then set the cam which works the fly, so that its point just clears the small friction roller on the shaft, and it will throw down the sheet correctly. Tighten the spring according to the size of the sheet, and set the spring crank so that it will prevent the fly from striking too hard on the table.

It will be seen that good presswork does not depend *entirely* upon the press—nor yet upon the workman, or the materials. Nor will a superiority in any one point compensate for a deficiency in another; the newest type will suffer from a poor roller, and the most careful making ready will be of no avail if poor ink is used. It is necessary that *all* the materials should be of the best kind—that they should be well adapted to each other, and fitly used. Although a good workman can do much with insufficient materials, there are cases where a neglect to comply with one condition is equal to a neglect of all.



R. HOE & CO'S

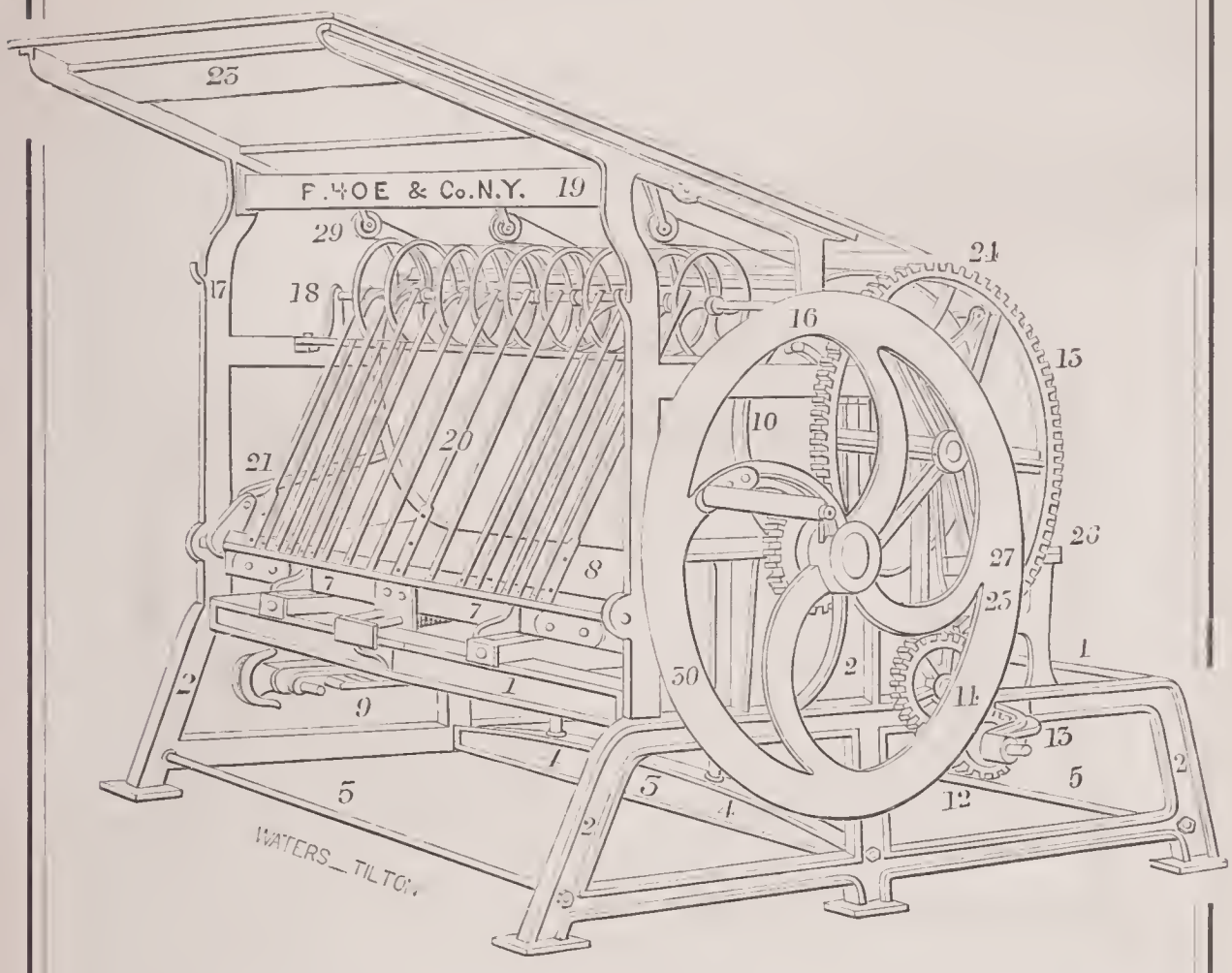
New Single LARGE Cylinder Hand-Printing Machine.

THE demand for a machine adapted to the wants of newspapers with small circulation has induced us to complete one to answer these requirements.

The above cut represents such a machine: it is intended to be driven by hand-power, and will print from six to eight hundred impressions per hour. It can be arranged, if required, to be driven also by steam-power. The speed can then be increased from one to two hundred impressions. It has registering apparatus, self-acting sheet-flyer, and iron bearers.

Size of Bed, inside bearers, 31 by 43 inches, price.....$1,000
If to be driven by Steam-power, extra.....$100
Boxing and Carting,.....$25

TERMS.—One-half cash, and one-half six months; or 2½ per cent. discount from the whole bill if all is paid in cash.



Directions for Putting Up the New Single Large Cylinder Hand-Printing Machine.

The several parts are taken and put together in the following order:

1..The ribs are rested, temporarily, about 20 inches from the floor.

2..Bolt either side frame—put in bridge beam No. 3, insert supporters No. 4 on top—insert stretchers No. 5; bring up the other side frame.

6..Hanger for rack pinion shaft attached to under side of ribs.

7..The roller frames laid in channels of ribs.

8..The bed is next put on with rack No. 9 attached.

10..The large cylinder with all its cams is placed in its bearings.

11..The universal joint shaft pinion, under rack and outside pinion No. 12, with outside hanger or brace No. 13.

14..Is the intermediate wheel connecting cylinder wheel No. 15 and pinion No. 12.

16..The bracket for tipping fingers of large cylinder.

17..The feed board frame; put in shaft No. 18, with the tape pulleys, also stretcher No. 19.

20..The fly frame, with attachments No. 21, the connecting rod to cam on cylinder shaft, and No. 22 the rod and spiral spring for throwing fly.

23..The feed board, with registering points when ordered (see directions for placing).

24..Brackets for feed guides, and guide bands hanging round cylinder to the rod inserted to support the ends of steel bands.

25..Inking rollers in the adjustable bearings.

26..Ink fountains, cloth roller No. 27, lifting roller No. 28 set on arms moved by the cam on the cylinder shaft, a similar cam moves the fountain roller, an intermediate pinion gears in rack on side of bed to work cloth roller No. 27. The cylinder tapes are next put around and over fly pulleys, around guide pulleys No. 29, back to cylinder.

30..The fly wheel and pinion is lastly put in gear with the cylinder wheel, and the press is ready for the form.

To find the place on the feed board for the points of the register to work through, first have the small points placed in the chase, then place a sheet on the feed-board and close the fingers of the press on it, mark around the ends and sides of the fingers with a pencil, and run the sheet through the press; then lay the sheet on the feed-board and turn the press so that the fingers may just close on the sheet exactly on the pencil marks without drawing it ahead, and the punctures made on the paper by the small points in the chase will be the place for making the holes in the feed-board.

R. HOE & CO'S

New Four Roller Book Printing Machine.

(See page 47.)

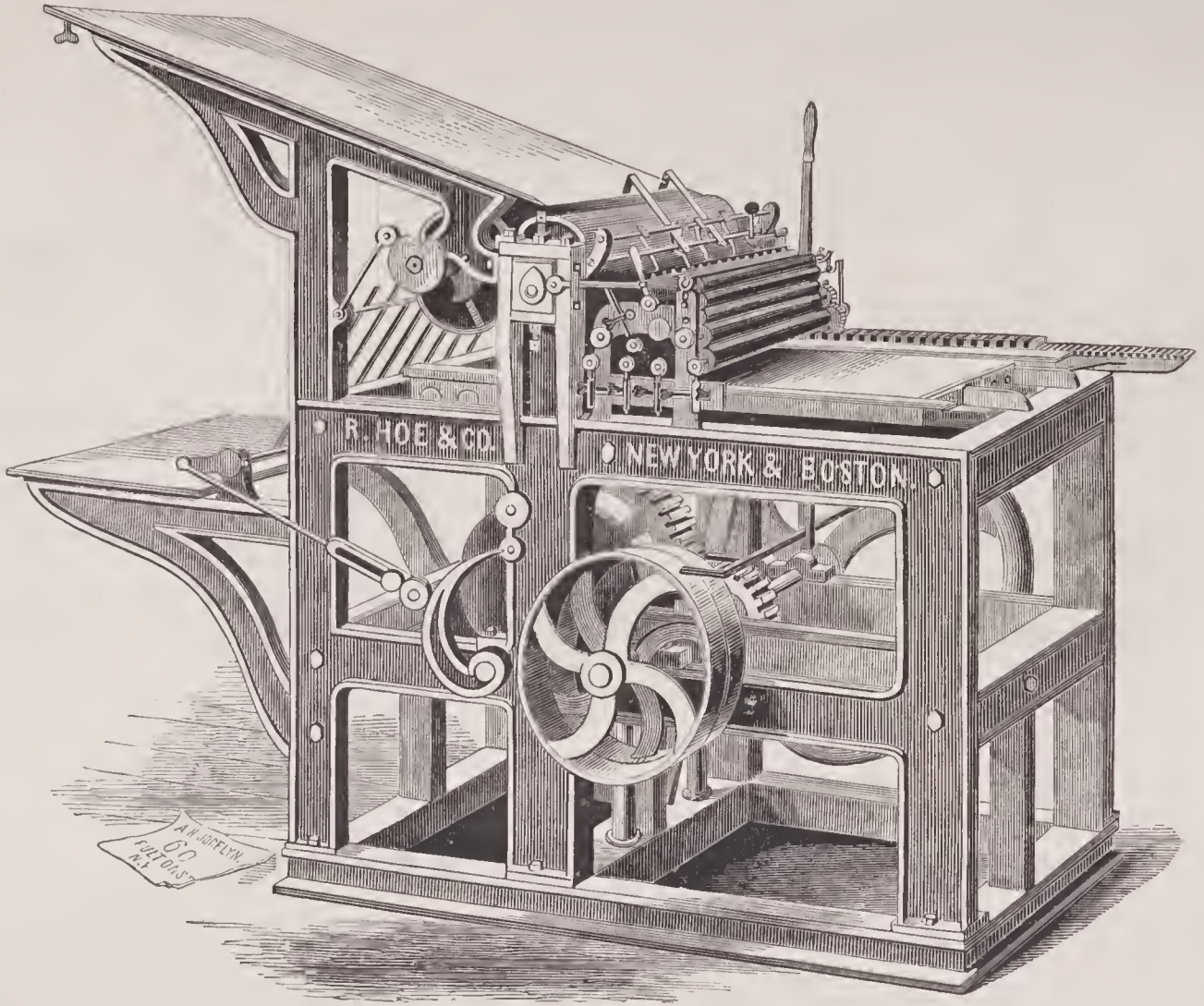
THIS machine is particularly adapted to fine book and cut work. The bed is driven by means of a crank and lever, which obviates the necessity of bed-springs, and gives to it a slow and uniform motion while the impression is being taken, but a quick return movement, thus combining a slow impression with speed. Four inking rollers pass twice over the form, It has a pointing apparatus, and the impression cylinder is stationary while the fingers close on the sheet, thus insuring the most perfect register. The fingers never require shifting, whatever size of form may be worked, and the sheet flyer is so arranged that no tapes are used on the press, which makes it very convenient for job work.

SIZES AND PRICES.

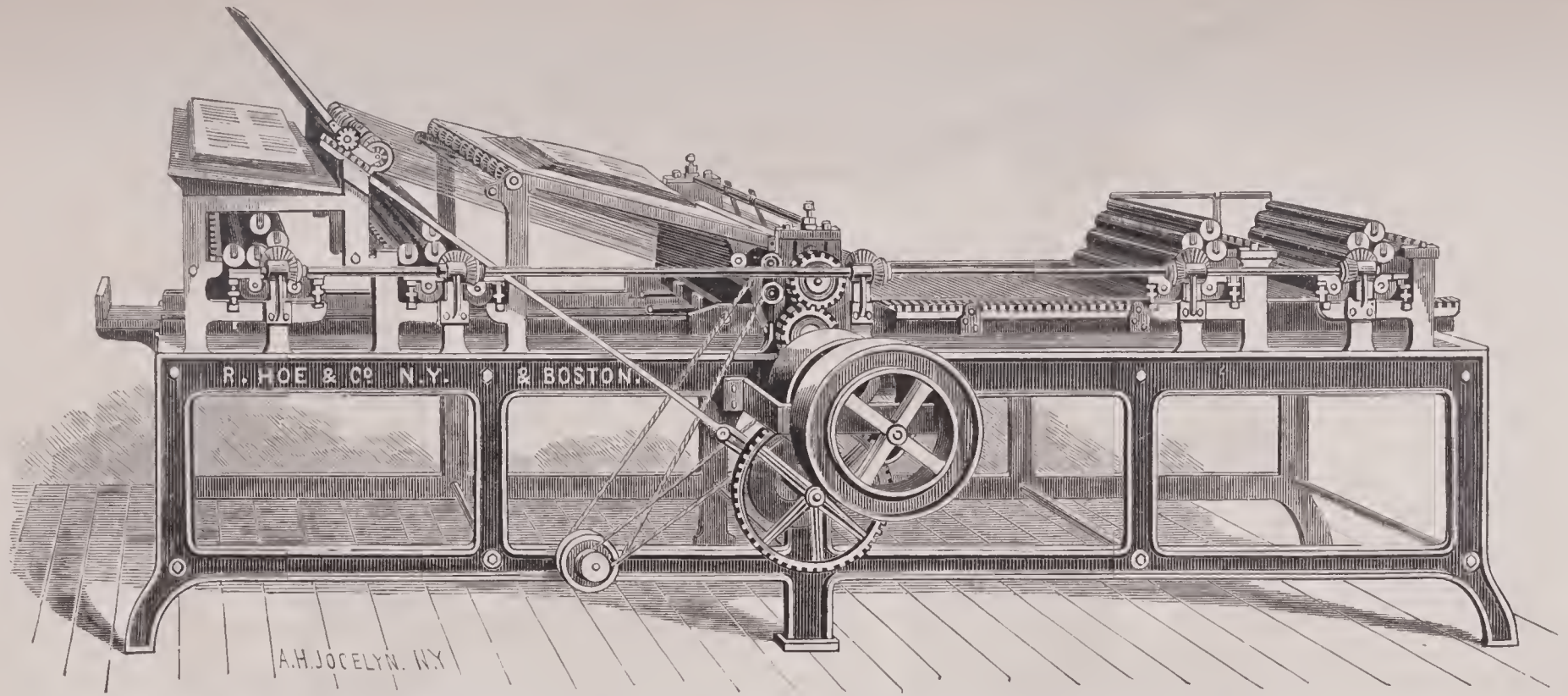
Medium, ...	Bed 23 × 28,	to work	5	type inking rollers.....	$1,800
Super Royal, "	25 × 33,	"	4	" "	2,000

TERMS OF PAYMENT.—Same as for cylinder presses.

Drawings and directions for putting up and working the presses, furnished with each machine.

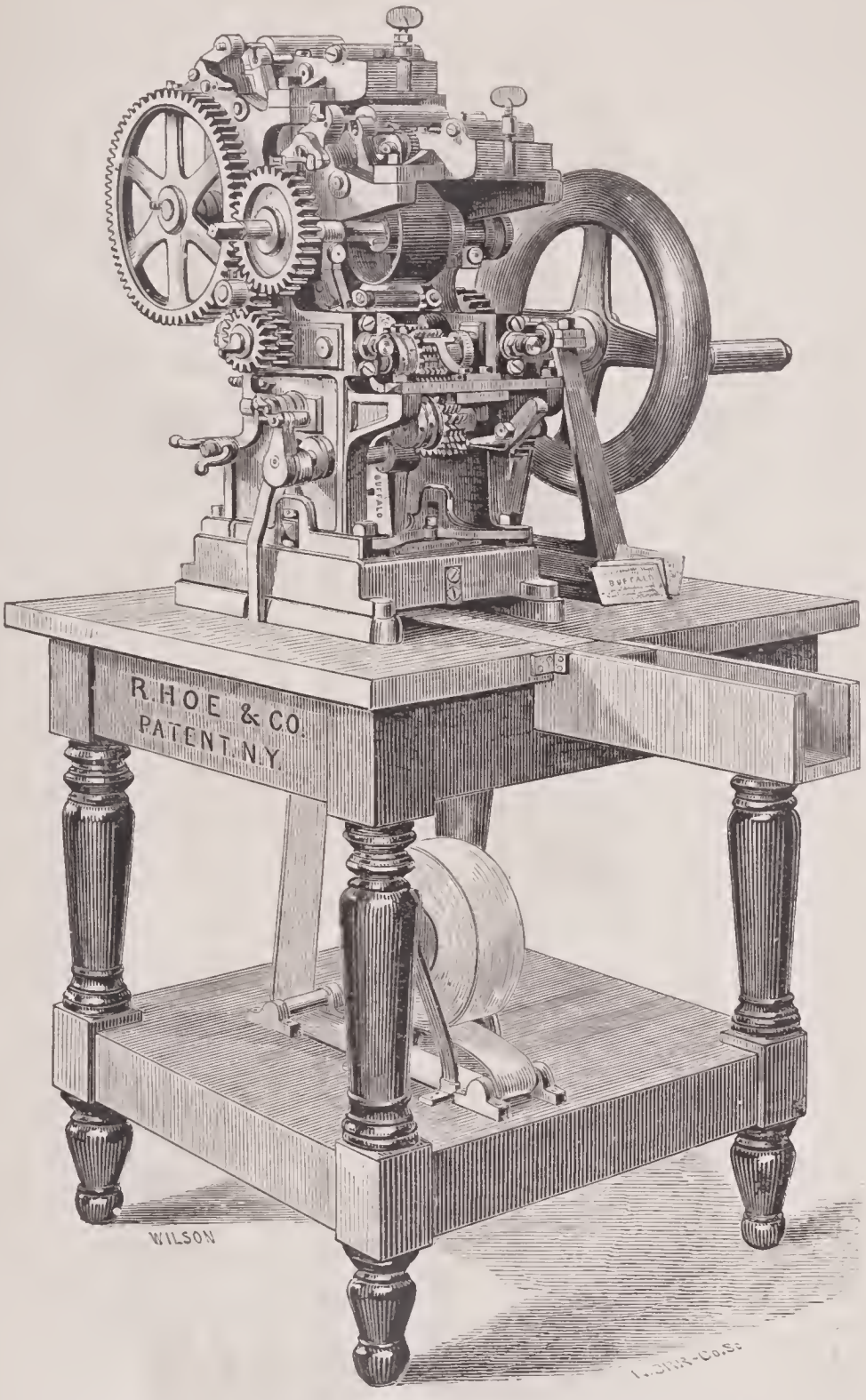


R. Hoe & Co's Four Roller Book Printing Machine.



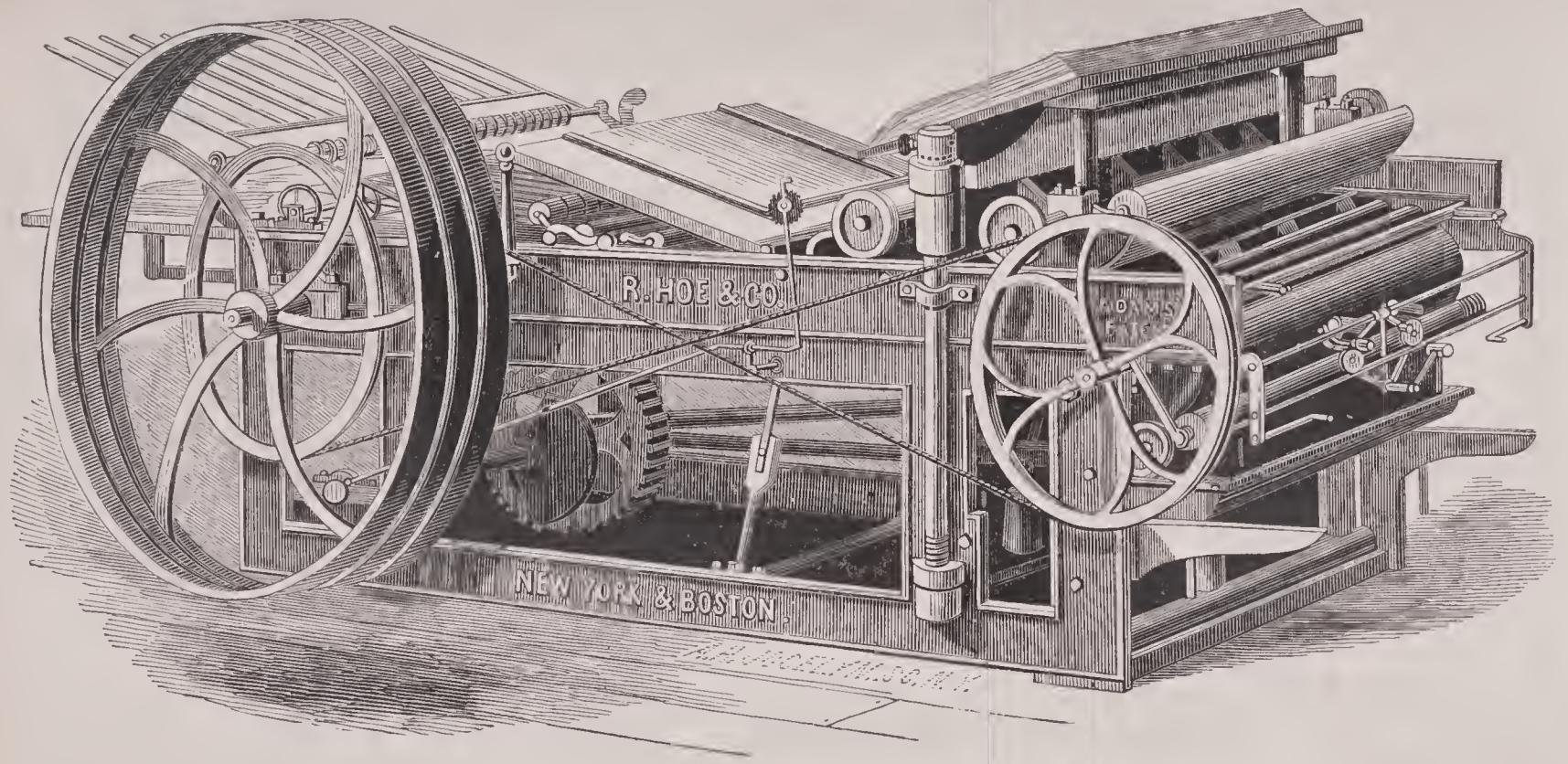
R. Hoe & Co's Four Color Printing Machine.

THIS Machine, which we now introduce to the craft, is simply the ordinary single small cylinder press, having the bed sufficiently long to receive four forms (when four colors are to be printed) and provided with four ink fountains, each one of which inks its appropriate form. The sheet is fed from a feed board and taken by fingers in the usual manner, but after receiving an impression from the first form, instead of being thrown off, it is held by the fingers and continues to revolve with the cylinder, and thus receives an impression from the second, third and fourth forms, as they successively pass under it. The fingers then open, and the sheet is thrown off and flown by the sheet-flyer in the ordinary manner. It is thus seen that the sheet is printed in four colors at one operation, and in perfect register, without any pointing being required. These machines are made to print two, three or four colors, as ordered.



R. Hoe & Co's Patent Railroad Ticket Machine.

In this machine the forms are placed on a cylinder which enables it to run with a continuous rotary movement. The tickets are worked from a roll of paper, and are printed, numbered, cut and deposited in a receptacle in numerical order in a single operation. The numbering apparatus prints the number in a different color from the body of the ticket, and can be set at 0 or any required number with great facility. The machine will print from 10,000 to 12,000 tickets per hour, and occupies a space of about two feet square.



R. Hoe & Co's Bed and Platen Power Printing Machine. (Isaac Adams' Patent.)

(See pages 53 and 54.)

Bed and Platen Power Printing Machine.

(ISAAC ADAMS' PATENT.)

For Letterpress and Cut work of the finest quality, these presses cannot be surpassed. They are too well known to the trade to need here an elaborate description. They are made with two, four, or six inking rollers, as may be ordered; they afford unequalled facility for making-ready the form, as the platen rolls off and leaves the bed entirely exposed. The sheets are taken from the feed-board by fingers, printed in perfect register, and laid in a pile by a self-acting sheet-flyer.

When necessary, the impression can be suspended without stopping the running-gear; and advantage can be taken of this, if desired, to run the inking rollers again over the form, and thus, by a sacrifice of time, make a two-roller press produce the same quality of work as a four or six-roller press.

A self-changing tympan-sheet apparatus is attached to the platen, by which much time is saved, and the quality of the work improved.

No other press presents such an array of sizes and styles.

SIZES AND PRICES.

No.	Platen.	Rollers.	Price.
1	34 × 48½ inches	6	$2,980
2	32 × 46 "	4	2,520
2½	30½ × 45 "	4	2,300
3	30½ × 45 "	2	2,030
3½	33½ × 43½ "	2	2,200
4	30½ × 43 "	6	2,250
5	30½ × 43 "	4	2,200
6	30½ × 43 "	2	1,950
7	28¾ × 43 "	6	2,140
8	28¾ × 43 "	4	2,085
9	28¾ × 43 "	2	1,870
10	30 × 40 "	2	1,870
11	27 × 43 "	2	1,820
12	26¼ × 43 "	6	2,010
13	26¼ × 43 "	2	1,765
13½	27 × 41 "	4	1,950
14	27 × 41 "	2	1,765
16	27 × 40 "	2	1,685
17	26 × 40 inches	6	$1,870
18	26 × 10 "	4	1,820
19	26 × 40 "	2	1,650
20	24½ × 38½ "	2	1,600
21	24½ × 37 "	2	1,575
22	23 × 34 "	2	1,525
22½	24 × 29½ "	4	1,660
23	24 × 29½ "	2	1,490
24	22¾ × 31½ "	2	1,490
25	22½ × 29½ "	6	1,730
26	22½ × 29½ "	2	1,440
27	20 × 25 "	4	1,450
27½	19 × 25 "	6	1,250
27¾	19 × 25 "	4	1,130
28	19 × 25 "	2	965
29	19 × 23 "	6	1,100
30	19 × 23 "	2	910
31	14 × 18 "	2	600

Boxing, Carting and Shipping	$12.00 to $25.00
Roller Moulds	12.00 to 30.00
Extra Friskets, according to size	2.50 to 4.00
Extra Fountains,	12.00 to 36.00
Extra Nippers	3.50 to 4.50
Extra for movable Fly-fingers and Tape-wheels	20.00 to 80.00
Extra for Cone Fly-wheel instead of the ordinary one	16.00
Counter Cone, Tight and Loose Pulleys, Counter Shaft and Hangers	30.00

Terms of Payment.—One-half cash, one-half six months for satisfactory note. 2½ per cent. discount from the whole bill if all is paid in cash.

Directions for Putting Up Isaac Adams' New Patent Power Printing Press.

First, put one of the side pieces of the frame in an upright position, with a block under each of its ends two or three inches deep. Then put to its place against this side piece the large end piece of the frame, and secure the two firmly together by means of the bolts belonging to them.

Next, put to its place against said side piece, the vibrating frame on which rest the springs which help to sustain the bed and form of type, a journal at one corner of said vibrating frame being placed in a bearing provided to receive it on the lower part of said side piece. Then put one end of the bottom bar, or "winter"—a heavy bar which sustains the force of the impression—into an oblong square opening in the lower part of said side piece, that side of the bar on which provision is made to receive the toggle joints, being towards the large end piece of the press frame.

Next, put to its place against said side piece, and secure with bolts the light end piece of the press frame; and then insert one end of a small rod which serves as a stay to the upper rails of the frame into a hole made to receive it not far from midway of said upper rails.

Next, put up the other side piece of the frame, with blocks under its ends, as in the case of the first piece: put the bolts by which it is secured into their places, and after levelling and squaring the frame, turn all the bolts and nuts up hard, so as to secure the frame in all parts with entire firmness. The bed must now be put into its place, the projections on ends being made to enter grooves formed on the side pieces of the press frame to guide it in its motions up and down.

Next, put the toggle joints into their places, their lower parts being jointed to the bottom bar, and their top ends to the under side of the bed, and the caps and screws which hold them to their places being put firmly together. The nature of the parts and the marks will indicate how this must be done. The pieces which serve somewhat as guides to keep the bed level as it rises and falls, should next be put on and bolted to their places under and at the ends of the bed. The impression cam (goose neck) should next be connected with the "bottom bar," and the bed so placed as to bring the roller in the middle joint of the toggle joints in such position as to allow it to enter the mouth of the impression cam when said cam shall be raised up and pressed forward. Next put the cams which operate the bellows and fly for taking off the sheets on the large gear wheel shaft, the geer being on it, and then put the shaft into its bearings on the large end piece of the frame.

Next, put the fly-wheel shaft with the pinion on it into its bearings, *taking care to have the pinion and large gear wheel go together, as marked.*

Next, put into its place the long shaft which has a bevel gear on each end of it to drive the distribution cylinder, and secure the box that supports said shaft. This shaft goes outside of the frame, and the bevel wheel on one end is made to gear into another bevel wheel, which is next to be put on the fly-wheel shaft and forced up to a shoulder on said shaft. There is a cover to go over one pair of these gear wheels.

Next, put the fly-wheel on to its shaft, and force it up close to the bevel wheel.

Next, attach the large connecting rod, or "pitman," to the large part of the crank pin on the large gear wheel, and also to the impression cam; and then, by turning the fly-wheel, raise up the bed and put the springs which help to sustain its weight into their places. To do this, after the bed has been raised up, first raise the vibrating frame on which the springs rest as high, on blocks, as will admit of the springs being pressed into their places.

The bed may then be drawn down by turning the fly-wheel until the rods on which the springs slide enter holes or boxes in the said vibrating frame provided to receive them, and until the bed shall be near enough to the vibrating frame to allow the frame to be connected with the bed by means of two flat connecting rods provided for that purpose.

The platen should next be put on in its place, and care must be had to put the shafts and wheels which sustain it on the top rails of the frame according to their *marks;* but before these are put on, the small brass pieces, on which hang the rollers that carry the travelling tympan sheet, should be connected in their places on the corners of the platen. Next, put to the ends of the platen the small pieces provided with thumb-screws to prevent the impression bolts from turning while the press is in operation.

Now screw the impression bolts into the ends of the bottom bar, first having put between said bolts and the frame certain small blocks of iron provided to keep them at a proper distance from the frame. In order to bring the work sqnare. the impression bolts must be turned into the bottom bar. nntil certain small marks which are made npon the threads of their screws shall come even with the top surfaces of the ends of said bar, and so that the hole marked No. 1 on the head of each bolt shall come opposite to the points of one of the before-mentioned thumb-screws.

The impression bolts will now be in their proper relative positions, and will rest on set screws in projections on the lower parts of the frame, which set screws are adjusted to their proper height before the press leaves the manufactory, and do not afterwards need to be altered. The impression bolts are kept in a perpendicular position by means of clamps, which are bolted on over them to the sides of the frame, and whenever said bolts are turned for the pnrpose of increasing or lessening the impression, care mnst be had that one bolt be turned as much as the other. The holes in their heads are numbered for this purpose.

A cross piece which rests near to the bottom bar on the ledges that project from the lower part of the frame, is next to be put into its place.

This cross piece serves to snpport one end of the rocker shaft which is nsed to disengage the main connecting rod so as to prevent an impression being given, whenever it may be necessary to do so. It likewise snpports a C spring, on which the impression cam falls; and an oblique stnd, which the toggle joints bear against when in their place of rest.

In order to get the rocker shaft for preventing impression into its place, disconnect the large connecting rod from the impression cam, and let the cam tnrn down on to the aforesaid cross piece, and then pnt the shaft into its bearings.

The mpression eam is now to be lifted np and again attached to the connecting rod, and then the bed may be raised np by turning the fly-wheel; after which, said C spring and oblique stnd may be bolted to their places on said cross piece, and the bolts which hold the cross piece to the frame may be pnt in and screwed up firmly.

Next, put into bearings on the lower rails of the frame the rocker shaft which has arms for moving the frisket carriage: and also the shaft which has the vibrating cam (dnck's bill) on it for moving the arms that move the frisket carriage. Now, a stnd that carries the friction rollers is to be put into slots in the arms that move the frisket carriage, said friction rollers being made to come within the oblong crooked openings in the last named cams. There are cap pieces which fit the journals of the two last named shafts, and which are now to be pnt on to their places within the journal boxes. And there are cap pieces with a set screw in the middle of each which are to be bolted on firmly over the first named cap pieces, the set screws having first been turned back, so that when the cap pieces are drawn down hard by the screws on to their seats, the jonrnals shall not be bound in their boxes. After the outer cap pieces have been bolted on as aforesaid, the set screws may be turned in nntil the nnder cap pieces are secnred firmly over the journals, but not so closely as to prevent said journals from moving freely in their boxes.

After the set screws are properly adjnsted. secnre them by means of the tightening nuts.

Next, pnt the frisket carriage in its place, and connect it with the arms that move it. Then pnt the four arms on to the small rocker shaft which operates the bellows that causes the sheets to rise from the frisket, and pnt said shaft into bearings which are located on the inside of the frame near to the fly-wheel shaft. Two of the aforesaid arms are made to bear against the nnder side of the bellows, so as to lift it. Another of them is used to hang weight upon. And the fourth has a roller in its end, which lies upon a cam which operates it, and canses the weight to rise until the proper moment, when, by means of a sudden falling off in the cam, the said weight is allowed to fall. and give a sudden pnff of wind from the bellows. Now set the cam which operates the bellows close up to the shonlder on the main shaft, and so that the marks on the cam and shaft shall coincide with each other. Then, by means of the set screw, secure the cam firmly. Next put the bellows iuto its place: it is suspended by four bars. two of which rest on a stay rod that crosses the frame near the bed, and the others are bolted on to the underside of the top rail of the large end piece of the frame.

Next, pnt the pointing board into its place. This is supported at its upper edge by pivots, which rest in holes in the top ends of two small pillars; and these pillars (or studs) should first be put on to the pivots, and then the shanks of said pillars, both at the same time, must be put into the holes provided to receive them in the top of the press frame. Next, put the fraue that contains a cluster of mahogany rollers into its place. This goes under the point ing board, and is supported at two of its corners by pivots which rest in holes made for the pur-

pose in the sides of the pillars that support the pointing-board. The other corners of this frame, as well as the two lower corners of the pointing-board, rest upon the top edges of the press frame, near the platen. Said roller-frame must be put in with the vibrating roller uppermost. Next, put the pieces on to the press-frame that support the rocker shaft that carries the fly for throwing off the sheets, put said rocker shaft into its place, the spiral spring which turns it in one direction being at the same time put on to the shaft, and then put the fly-frame on to the said rocker shaft. Next, put the board that covers the cog wheels into its place, and upon this board put the small pillars, or studs, and bar of wood upon which the fingers of the fly rest when receiving the sheets. Next, put into its place upon the end of the press-frame to which the fly is attached, the small shaft on which are several shives, or band pulleys. The journals of this shaft run in pivot holes made in the top ends of the small brass studs which stand in holes made in the top side of the frame to receive them. Both studs must first be put on to the journals, and then the two at the same time put into their places.

Next, put into its place on the end of the press-frame, a rocker shaft that has two arms upon it, one of said arms having a roller in its end for a cam to operate against, and the other arm being provided with teeth on its outer end which geer into a toothed pinion on the fly rocker shaft. A cam, before mentioned, on the main shaft operates this rocker shaft and the fly. This is raised and lowered by means of a lever which passes along by the front side of the machine, between it and the person who lays on the sheets to be printed. Next, bolt on to the front side of the press a piece of wood which has a series of holes in it, by means of which the said lever by which the table is moved up and down is held in such position as may be desirable.

Next, put on to the inside of the press-frame a bent lever which has a ketch at one end, by means of which the fly is held down when no sheet is received upon it. The lever is operated by the foot of the pointer. A spring by which the motion of the fly is modified is next put on to one end of the pieces which support the journals of the fly rocker shaft. Next, at the bed end of the press, bolt to the press-frame the two brackets which form slides upon which to support the fountain; and then put into their places the levers which support the composition roller that carries the ink from the fountain to the distribution cylinder.

Next, put on to the inside of the press-frame near to the end, the two hangers that support the distribution cylinder. Upon these hangers are small brass boxes in which run the journals of a vibrating cylinder to distribute the ink laterally, and also the journals of two composition distribution rollers. Next, put into its place the said vibrating cylinder, the bores to receive the journals of which are situated in the lowest part of said hangers.

Next, bolt on two small pieces which have a friction roller in each to operate against the ends of the vibrating cylinder to cause it to move to and fro in the direction of its length.

Next, attach to the inside of the press frame, over the place for the distribution cylinder, a frame which has in it two wooden distribution rollers. These rollers are connected to each other by toothed wheels on their ends. This roller-frame is hung to the press-frame by means of a bolt at each of two of its corners, and the other two corners are supported on brackets, one of which projects inwards from each side of the press-frame near to the bed. Next put in two thumb-screws which serve to hold the distribution roller-frame down in its place. These screws are put through the sides of the press-frame from the outside near the top, and not far from the end.

Next, hang the large distributing cylinder.

Next, put on in front of the distribution cylinder, the frame-work in which runs a carriage carrying a short composition roller which is made to travel from end to end of the distribution cylinder—to and fro—by being pressed obliquely against it.

This carriage runs upon a rod supported by hangers from the two corners of the press-frame; and it may be taken out at any time by first taking out the rod on which it travels.

Next put on to the inside of the press-frame, near its upper part, and near the edge of the platen towards the distribution cylinder, the wedge-like "click" which serves to push back the slide of the nipper-frame to relieve the grip of the nippers.

Then put the nipper-frame into its place on the frisket-carriage, and bolt on to the insides of the upper rails of the press frame the two cams which raise the nippers and nipper-frame when advancing towards the pointing board to take the sheet which is to be printed. Next put on to the pointing board the small bent lever that operates the "points," the end of the lever that connects with the point levers being put between the point levers and the sheet-iron plate of the pointing board. The other end of said lever—when the pointing board is in its place for work—passes down by the side of a spring on the inside of the press-frame, which serves to let down and hold up, alternately, the

points at the proper periods in the operation of the machine.

The pointing board should always be lifted and lowered down—when raised up for any purpose—by taking hold of the side of the board next to the person who points the sheets: otherwise the lower end of said bent lever will not come into its proper place.

Next, screw a brass hook on to the under side of the frame of the pointing board. This serves to hold up both the pointing board and the cluster of mahogany rollers in nearly a perpendicular position, by being hooked on to the corner of the roller-frame. These parts are fastened up in this way in order that the platen may be drawn off from over the bed, to put on forms, and for other purposes.

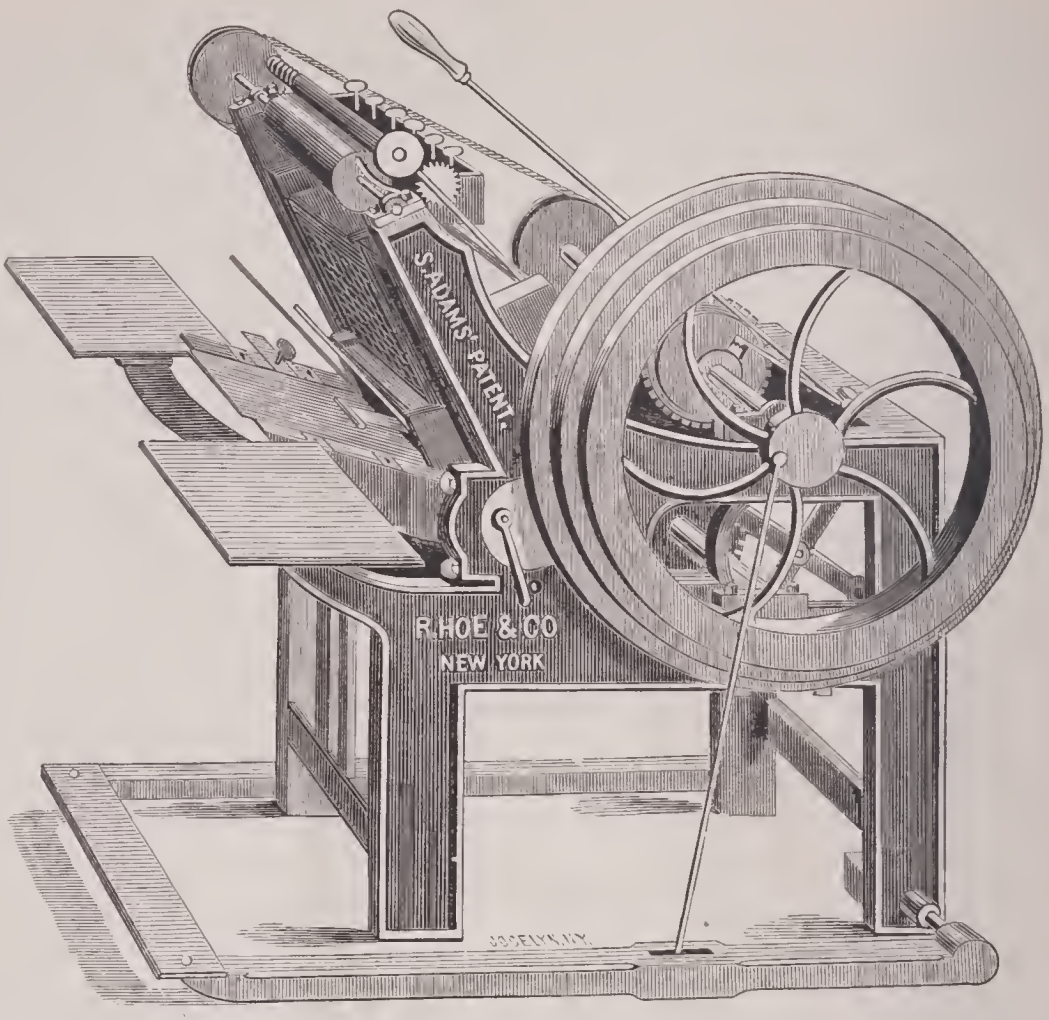
Strong cotton tape bands may now be put on to the rollers and shives, upon which to carry the printed sheets from the frisket on to the fly. One set of these bands pass around the roller nearest to the platen, and also around the roller that is so hung as to be capable of vibration. Said bands should be made sufficiently short to bring the arms on which the vibrating roller hangs into a perpendicular position.

The other set of bands pass around the second roller from the platen, over the third roller from the platen, under the vibrating roller, and around the shive pulleys between the fingers of the fly.

To drive the mahogany rollers and the shive pulleys, a flat band runs from a pulley on the fly-wheel shaft over a pulley on the shive pulley shaft; and then a small round leather band is put around a grooved pulley on the shive pulley shaft, crossed and carried around the vibrating roller. The drawer, or frame which answers to the tympan frame of a hand press, is best covered with parchment or India rubber cloth. The latter is now preferred by printers when it is good, and of *even softness*. If it is not of even softness, an even impression cannot be produced with it. Fine linen will answer, but it will not admit of so fine impression as either of the other substances.

It will be obvious to the person who sets the press up, how the drawer goes on to the face of the platen. One edge of it is held up by lapping a little on to the edge of the platen, and the other by slide bolts at the corners. The same kind of blanketing may be used as in the hand press; but when the drawer is covered with India rubber cloth, no blanketing is needed, except on a very heavy form. The tympan sheet should consist of a very long sheet of strong smooth paper, the width being equal to the length of the platen. Or else it should consist of a web of the finest kind of cambric. This is drawn under the platen, and its ends attached to rollers, one of which rollers lies in bearings at one side of the platen, and another at the other side of the platen. By means of these rollers, the tympan sheet is moved from place to place, as it becomes soiled by use, until it has been used as much as proper throughout its length. It will bear using several times over. If it consists of cambric, it may be washed. For some kinds of printing, it is best that the tympan sheet should be moved periodically the whole width of the form at a time; and in this case, the rollers for the purpose must be turned by hand. But generally it is more convenient for the rollers to be turned by the machinery in such manner as to move the tympan sheet a very short distance at each impression. To effect this movement there is a small lever suspended from the end of one of the spindles of one of the tympan sheet rollers, and this lever carries a "click" that operates on a ratchet wheel on the end of the roller spindle to turn it. The lever is operated by a small crank screwed on to the outer end of the main shaft, the crank operating on the lever by means of a rod connected to the crank by one end, and operating on the lever by a hook at the other end. The hook end of the rod is supported by a piece screwed into the side of the frame for the purpose, the rod sliding in a bearing formed in said piece. Very fine flannel is used by some for tympan sheets. The table that the "heap" is placed upon stands upon the platen, and its top is adjustable.

What remains will easily be understood by a good pressman.



R. Hoe & Co's Bed and Platen Job Printing Press.

SETH ADAMS' PATENT.

THIS favorite little press is built in our best manner, and has no superior for the various kinds of job and card printing.

It is worked by a treadle, but the fly-wheel is adapted to receive a belt, so that steam-power may be employed if desired. It is so arranged that it can be thrown out of action in an instant by a hand-lever, without stopping the press.

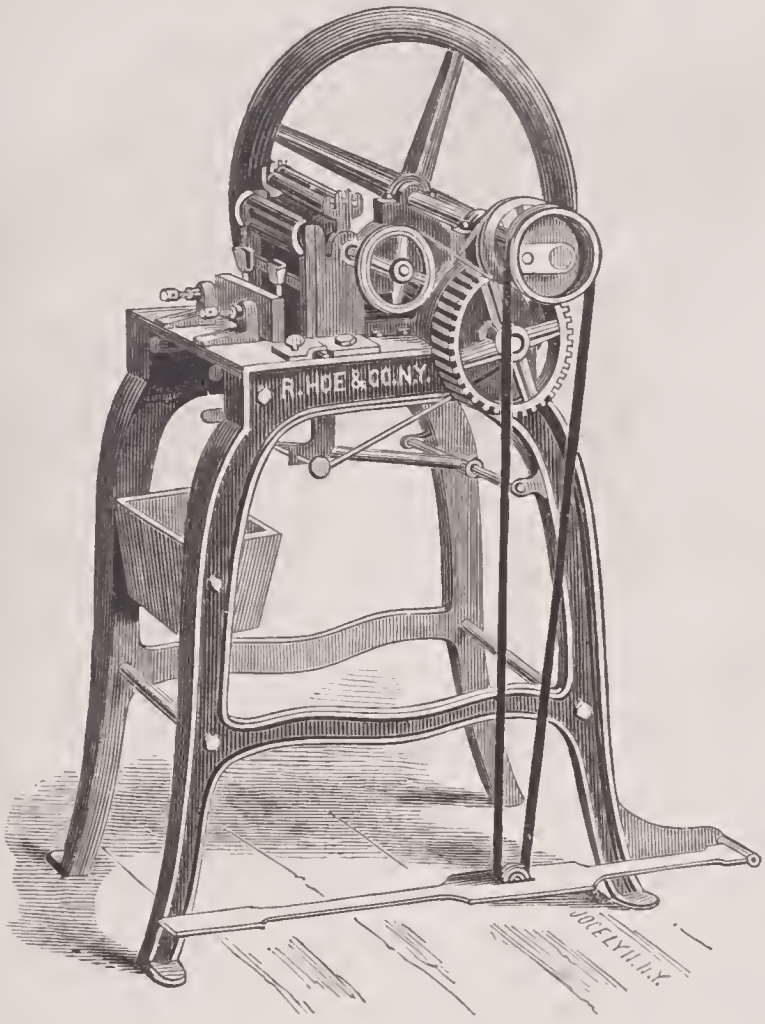
The work is placed to the adjustable guides on the platen, which lies in a convenient inclined position, and is lifted up to the bed by means of a cam on the main-shaft. The distribution is very good; the ink being taken from the fountain by a ductor roller, is communicated to a metal cylinder on which a vibratory roller is kept continually traversing; the inking rollers, which are held in a sliding frame, receive a supply from the metal cylinder and then pass and repass smoothly over the form.

A roller mould, extra roller stocks, and chases are furnished with the press.

SIZES AND PRICES.

No. 1, Bed 8 × 10½ inches, Platen 5 × 8 inches $225.00
2, " 11¼ × 14 " " 9 × 12 " 350.00
Boxing and Carting, $7.50. Extra Fountain, $5.00. Chases, .75
Counter-Cone, Counter-Shaft, Hangers and Pulleys for steam power, $25.00

TERMS OF PAYMENT.—One-half cash, one-half six months for satisfactory note. 2½ per cent. discount from the whole bill if all is paid in cash.



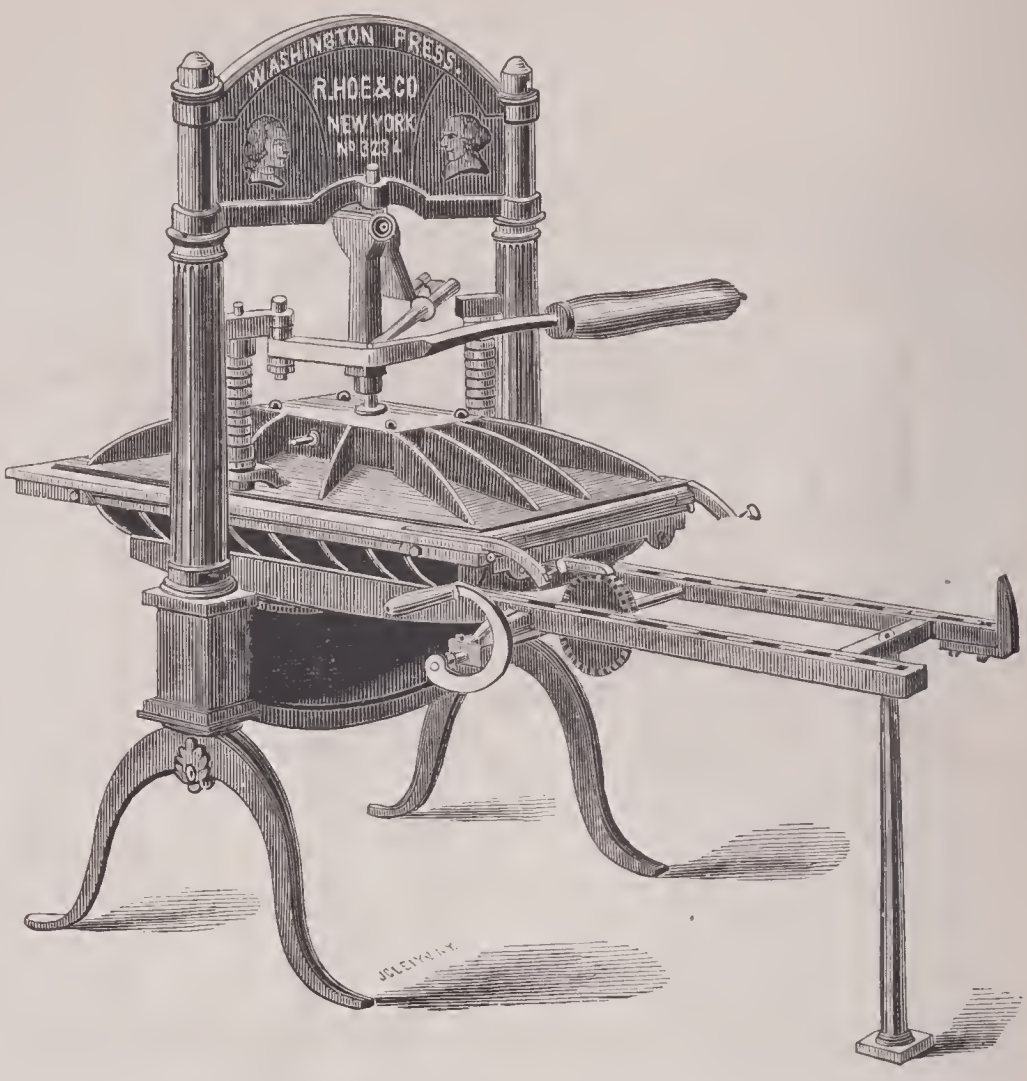
R. Hoe & Co's Patent Machine Card Press.

For printing Cards and small Circulars this machine is not surpassed. It is worked by either a crank or treadle, and will print from 1,000 to 1,500 cards per hour in the best manner.

Price, $150.

Size of chase inside, 5 × 6¼ inches.

Boxing and Carting, $2.50.



R. Hoe & Co's Patent Washington Printing Press.

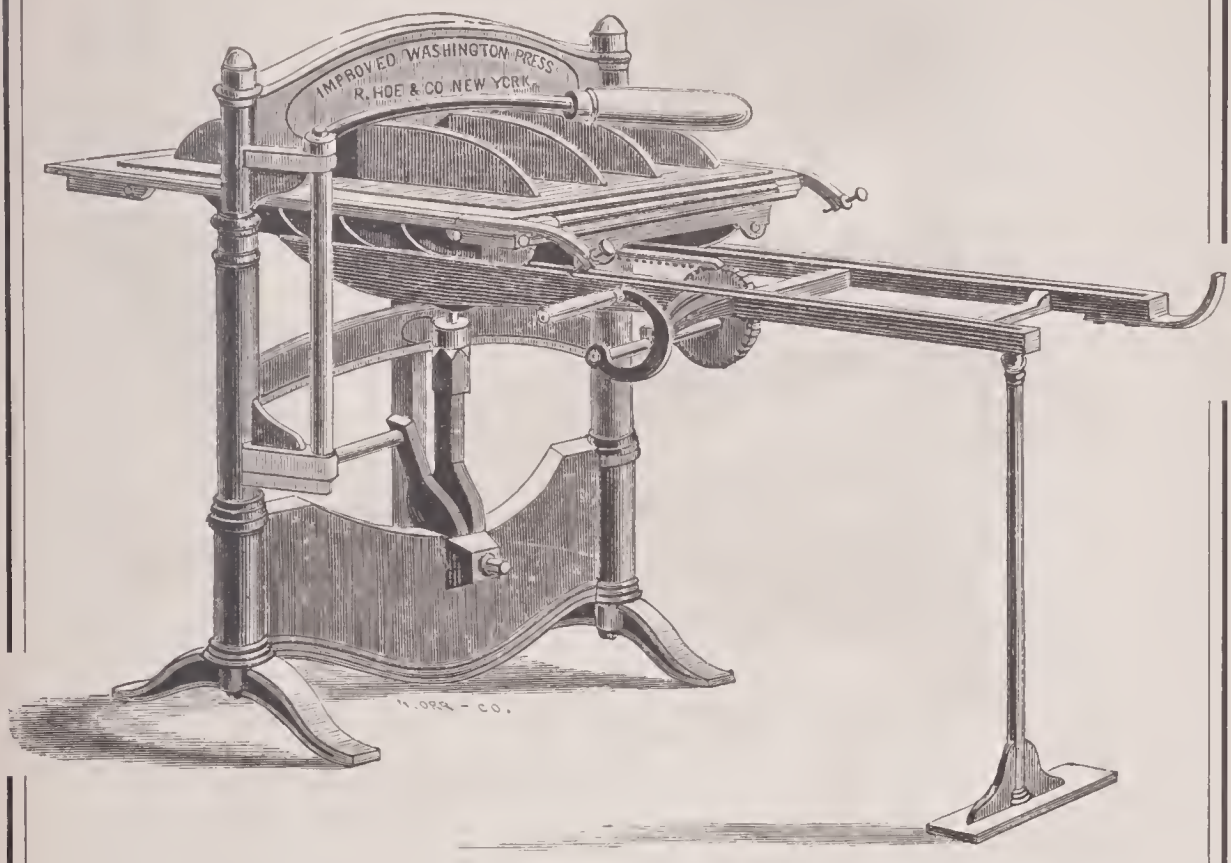
The celebrity which our Patent Washington and Smith Hand Presses have obtained, and their exclusive and constant use in almost every Printing Office in the United States and other countries, during the last twenty years, renders any remarks upon their superiority unnecessary. They are elegant in appearance, simple, quick and powerful in operation, and combine every facility for the production of superior printing. Each press is tried at the manufactory, and warranted for one year.

SIZES AND PRICES,

	Platens.		Beds.	
Foolscap	14½ × 19½ inches		18 × 24 inches	$165
Medium	19 × 25 "		22½ × 29½ "	200
Super Royal	22½ × 28 "		26¼ × 32½ "	220
Imperial No. 1	21¼ × 30 "		24¾ × 34½ "	230
" " 2	22¼ × 32½ "		25¾ × 37 "	240
" " 3	23 × 35 "		26½ × 39½ "	250
" " 4	24 × 37 "		27½ × 41½ "	260
" " 5	25 × 39 "		28½ × 43½ "	275
" " 6	26 × 41½ "		29½ × 46 "	290
Mammoth	34¼ × 43¼ "		38½ × 48 "	380

Two pairs of points, 1 screw wrench, 1 brayer, 1 slice, and 1 extra frisket, are furnished with each press without additional charge.

If the frame is made to be taken to pieces $10 extra. Boxing and Carting $3.



R. Hoe & Co's Improved Washington Press.

THIS press in many respects is superior to the Washington as represented on preceding page. It takes up much less room in height and is equally simple, quick and powerful in its operation.

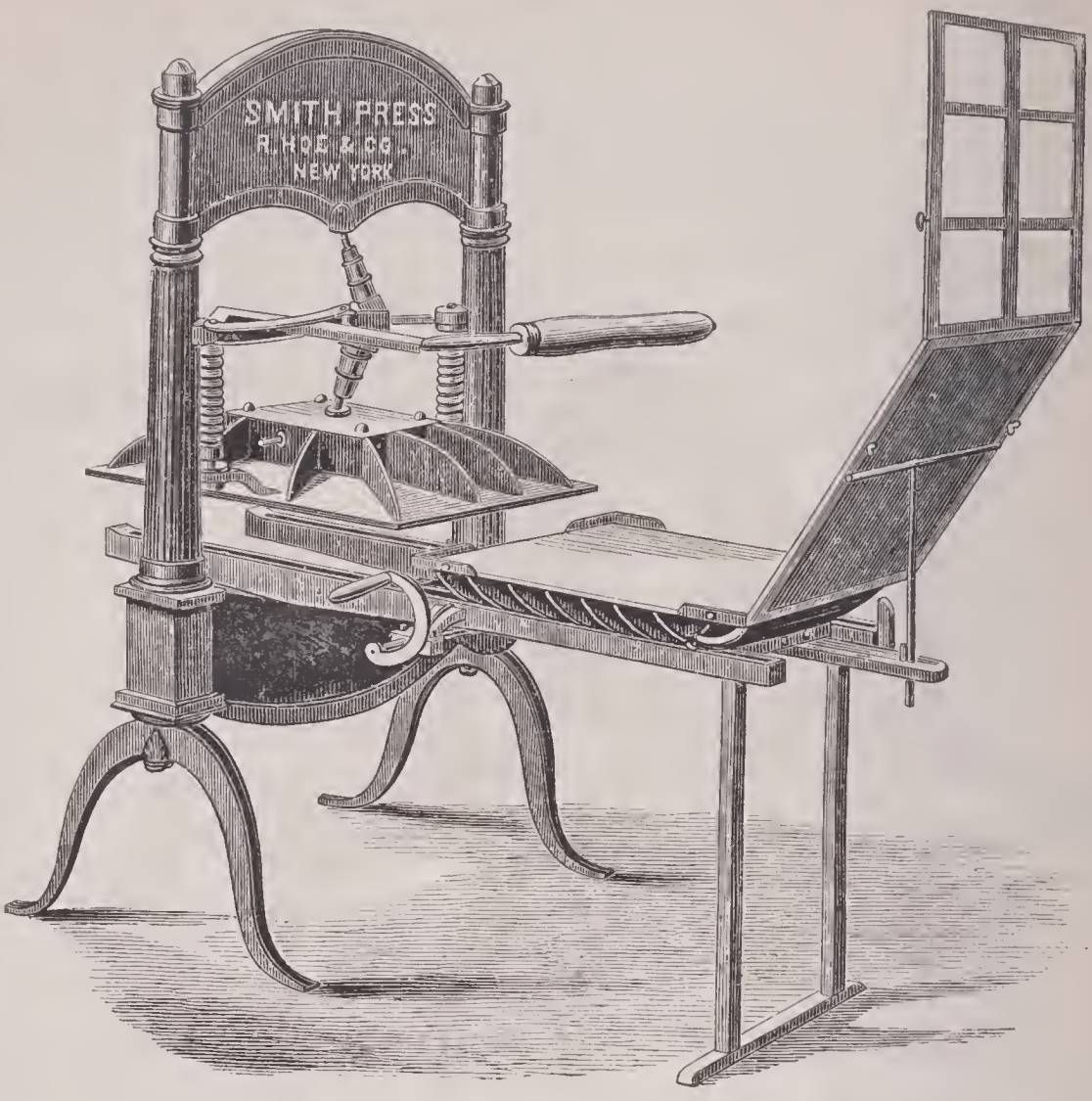
The sizes and prices are the same.

Directions for Putting Up the Improved Washington Hand Press.

First, put in the rods through the columns from below, then put the back slide piece through the cross brace between the columns. Next, put on the top or platen and secure the same with the nuts; observe to have the key holes in the bottom of the rods parallel with the frame, so as to admit of the legs being keyed on.

Next, put in the vertical shaft connected with the impression handles, then put on the feet or legs and drive in the keys to secure them. Stand the frame up and level it from the under side of platen, lay the ribs on fronting towards the name plate with the standard under the outer ends, and the standard and lever right under them on the frame with its adjusting wedge in its place, and connect the lever to the impression shaft.

Screw in the rack pinion, crank and shaft, also screw the rack to the underside of bed, lay the bed into the ribs, run it under the platen to its proper place, put a pair of bearers on the bed, and take an impression, and level up the outer standard to keep the ribs easy to work in their place.



R. Hoe & Co's Patent Smith Printing Press.

(See page 60 for Sizes and Prices.)

Directions for Putting Up the Washington and Smith Hand Presses.

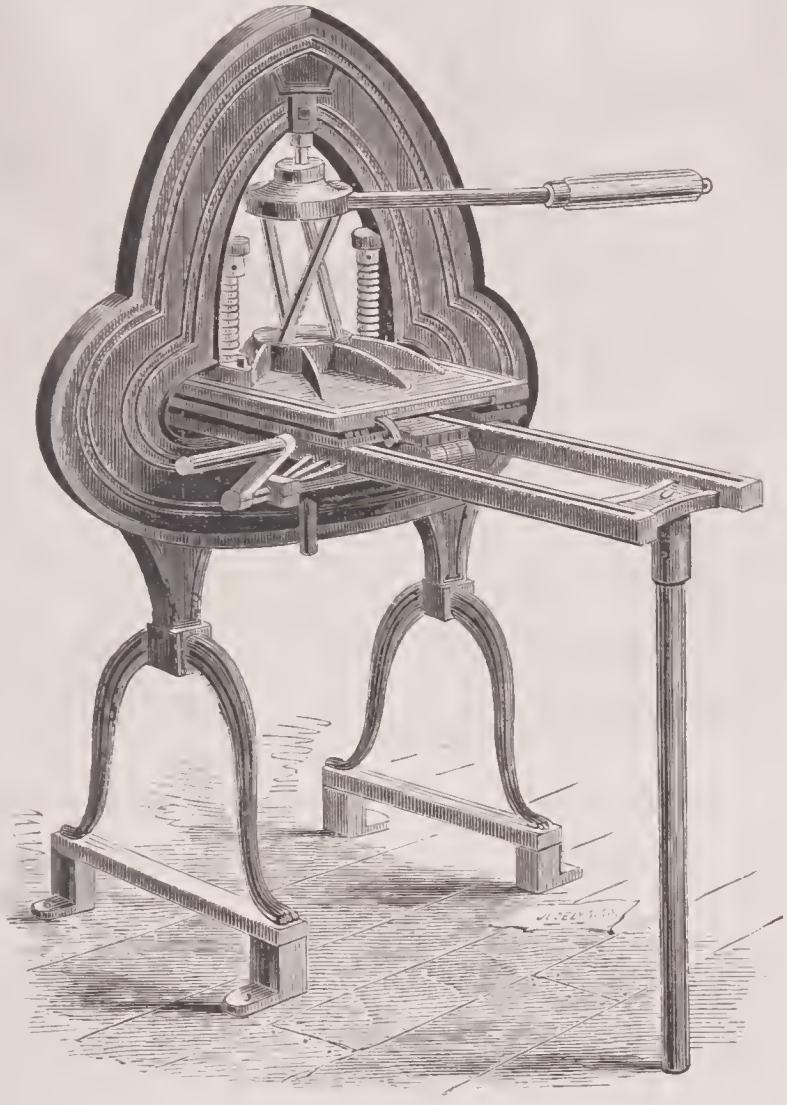
It will be necessary to observe that all the connecting parts are marked, or indented by points; if these are carefully observed the press may be put together without difficulty.

After setting the frame upon its legs, and putting on the ribs and bed, lay the platen on the bed, placing under it two bearers about type high. Then put the springs in their places, and the nuts over them, and pass the suspending rods through them, observing to place the rods so that the number of indentations on them correspond with those on the platen. Give the nuts two or three turns, then run in the bed, so as to bring the platen under the rods, and screw them fast to the platen, after which put in the bar-handle, standard and lever, (or wedge and knees if a Smith Press.) Turn the nuts on the suspending rods, so as to compress the springs just enough to give the platen a quick retrograde motion, observing at the same time to get the surface of the platen parallel with the surface of the bed.

After having put the press together and levelled it, be particular not to raise the end of the ribs by the gallows, but let it go under rather loose, which will have a tendency to make the bed slide with more ease on the ribs.

The size of the press is marked on the *front end* of the platen.

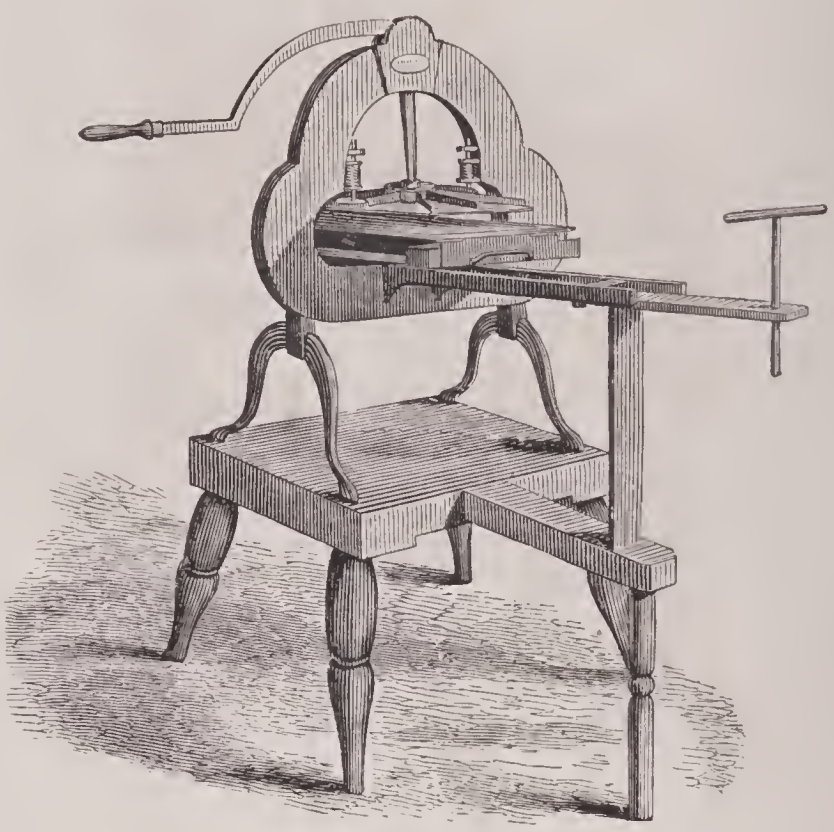
Presses of large size destined for Mexico, South America, or other mountainous regions where there are no carriage roads, have their frames made so that they can be taken to pieces and packed in smaller packages.



R. Hoe & Co's Hand Press. (Stansbury Patent.)

Bed 13 × 16¼ inches. Price, $100.

Boxing and Carting.....$2.

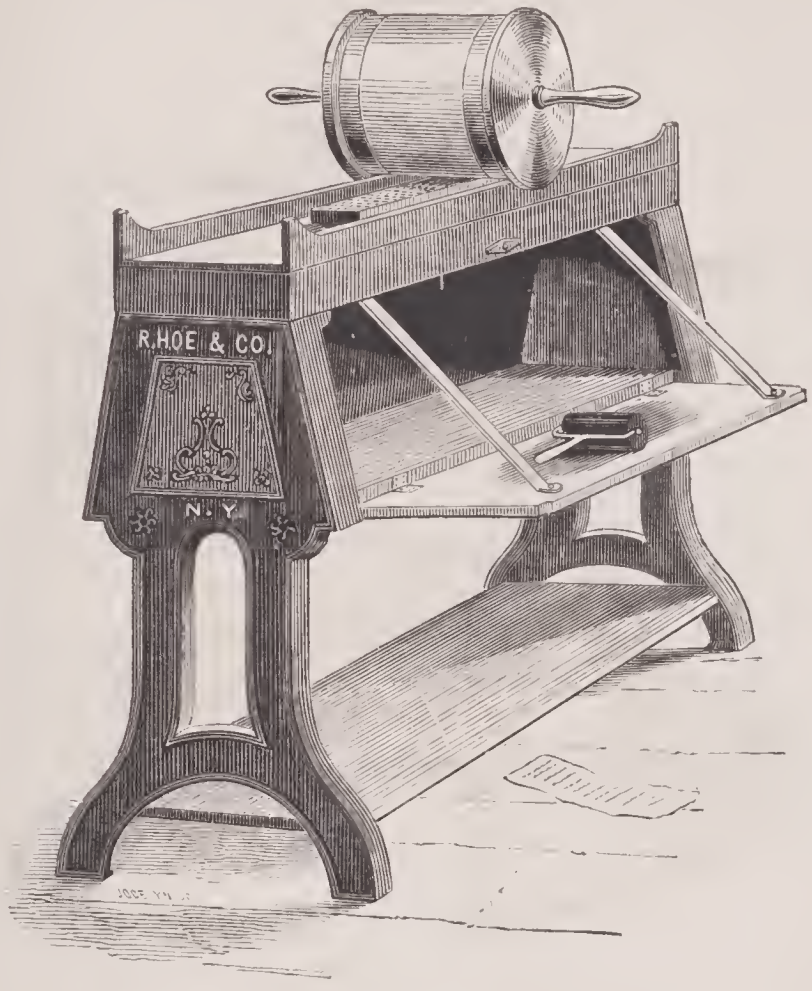


R. Hoe & Co's Hand Lever Printing Press.

For printing Circulars, Hat Tips, &c.

SIZES AND PRICES

Half-sheet Post, platen	7	×	9½ inches	..... $40
Foolscap,	"	13½	× 17½ "	 75



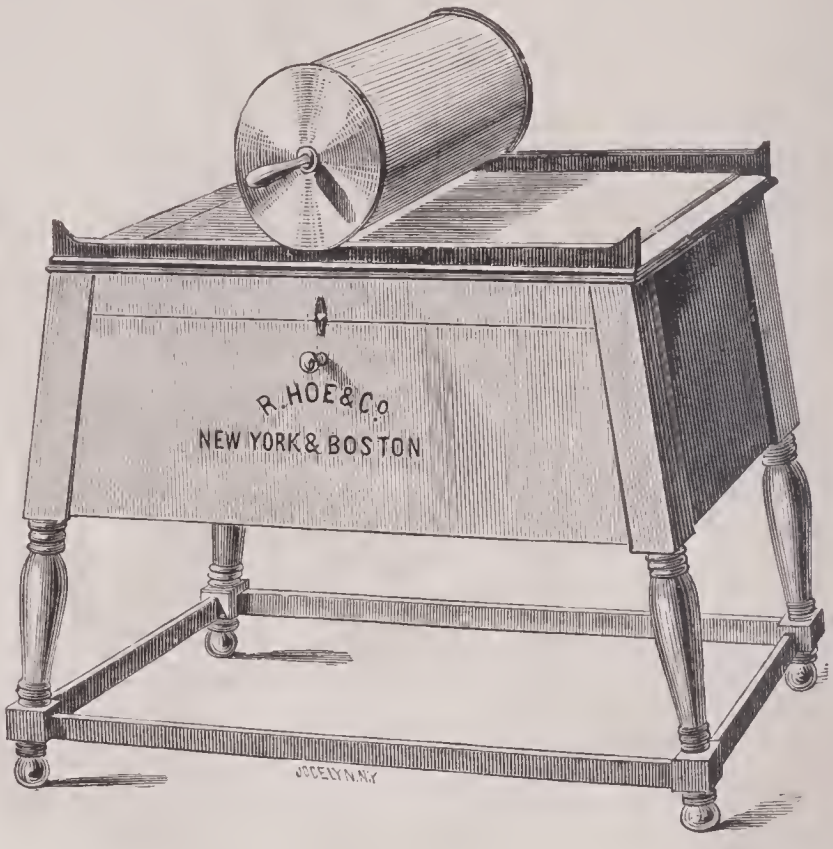
R. Hoe & Co's Ready Proof Press.

THIS machine consists of a cast-iron table, or bed and railway, supported by a cast-iron frame. The solid cast-iron cylinder is of weight sufficient to give the requisite impression, and has a flange at each end to prevent it from running off the track; the surface of the cylinder is turned parallel to the bed, and is covered with a blanket. The railway stands above the level of the bed as much as the height of the type and the thickness of the galley bottom.

The frame is furnished with a closet to hold the ink-roller and damp paper, The closet door, when let down (as shown in the cut), can be used as a distributing table.

The machine should stand level, so that the cylinder will rest at either end. When a proof is wanted, place the galley with the matter in it on the bed, ink it, lay on the slip of paper and roll the cylinder to the other end of the railway.

PRICE, including proof roller, $65.00
Boxing and Carting,..... 2.50

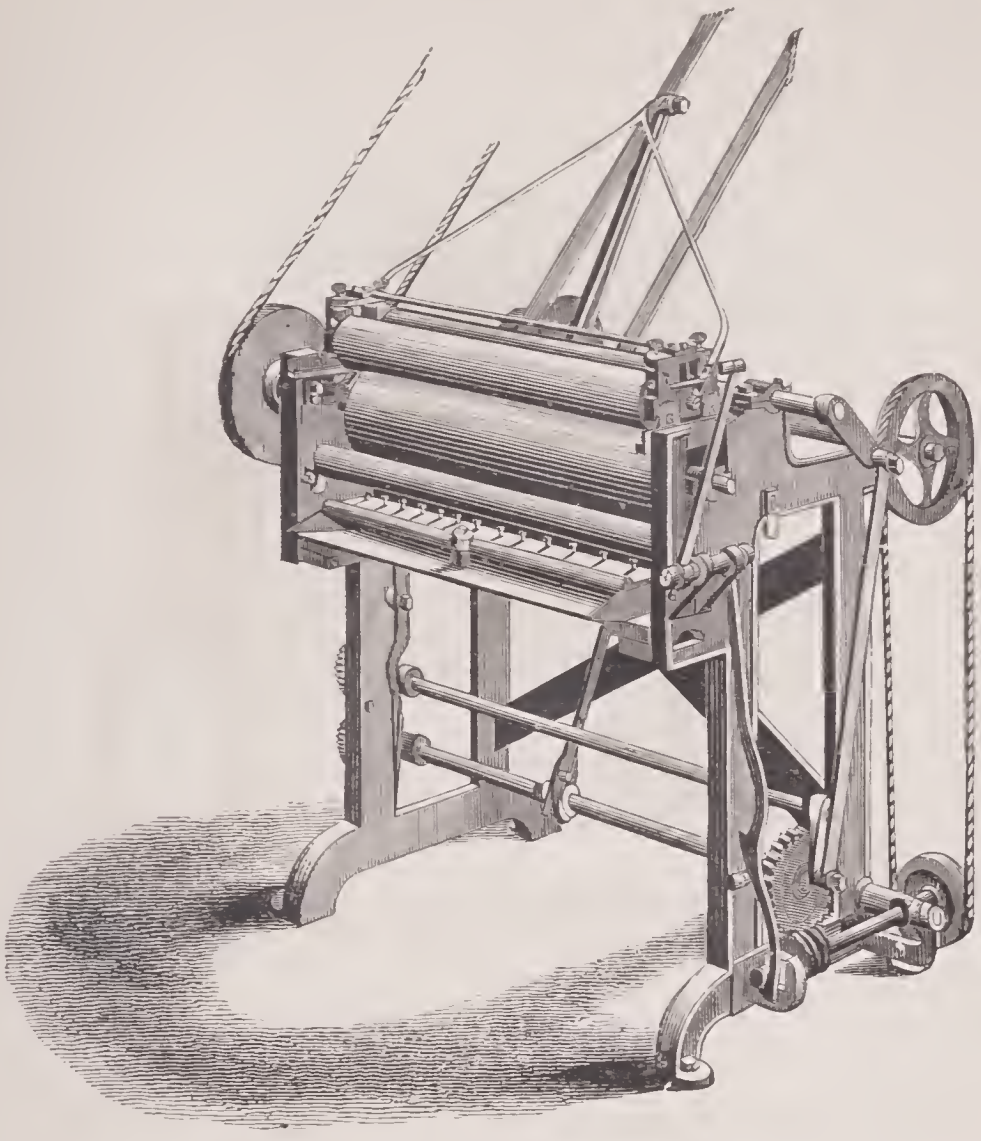


R. Hoe & Co's Ready Proof Press for Jobbing.

THIS machine is made on the same principle as that shown on the preceding page. The bed is not attached to the frame, so that it can be moved about with great facility, and, if desired, the frame can be entirely dispensed with, and the bed laid on an ordinary counter, where it can be worked with equal ease and accuracy. The frame is of hardwood, well seasoned, handsomely finished and varnished, and very strong: it is furnished with a closet which holds the ink, roller and damp paper, the door of which, when let down, can be used as an ink table. This size is especially intended for job offices.

SIZES AND PRICES.

Bed 16 by 28 inches inside	$50
If without Table	40
A smaller size without Table	30

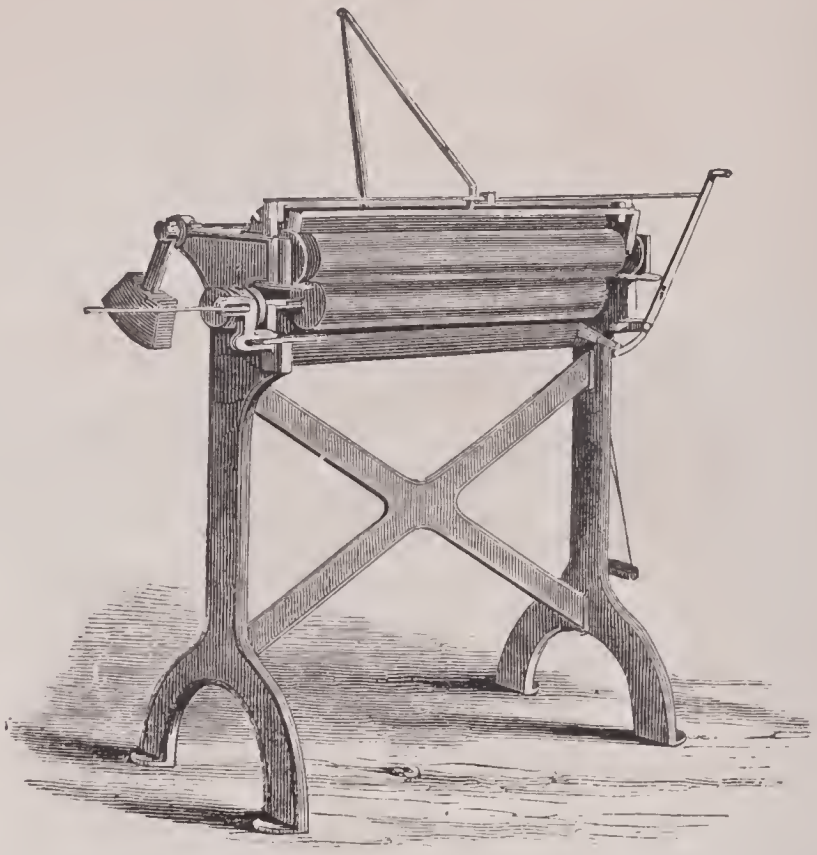


R. Hoe & Co's Patent Hand-Press Steam Inking Machine.

In consequence of the introduction of wood-cut illustrations into the finest letter-press work, a greater distribution of ink than has been heretofore obtained is rendered necessary. With this object in view we have constructed an Inking Machine, to be attached to a hand press, to be driven by *steam* power. It has two rollers to pass over the form, one or more times to each impression. The strongest inks may be used. The distribution is perfect, and uninterrupted by the operation of the press. The Machine is not at all liable to get out of order.

SIZES AND PRICES.

Folio Post	$150.00
Medium	165.00
Super Royal	180.00
Imperial	200.00
Counter Shaft, Hangers and Pulleys, extra	16.50
Extra Fountain, Folio Post	18.00
" " Medium	20.00
" " Super Royal	22.00
" " Imperial.....from $22 to	35.00
Boxing and Carting	3.00



R. Hoe & Co's New, Patent, Self-Inking Machine—1848.

By means of this machine the pressman inks the form by the ordinary operation of the press, and gives a more perfect distribution of the ink. The present machine, patented by Richard M. Hoe, and but recently introduced to the public, is much more simple in its construction, regular in its movements, easier to put up, and is far superior, in every respect, to anything of the kind heretofore in use.

SIZES AND PRICES.

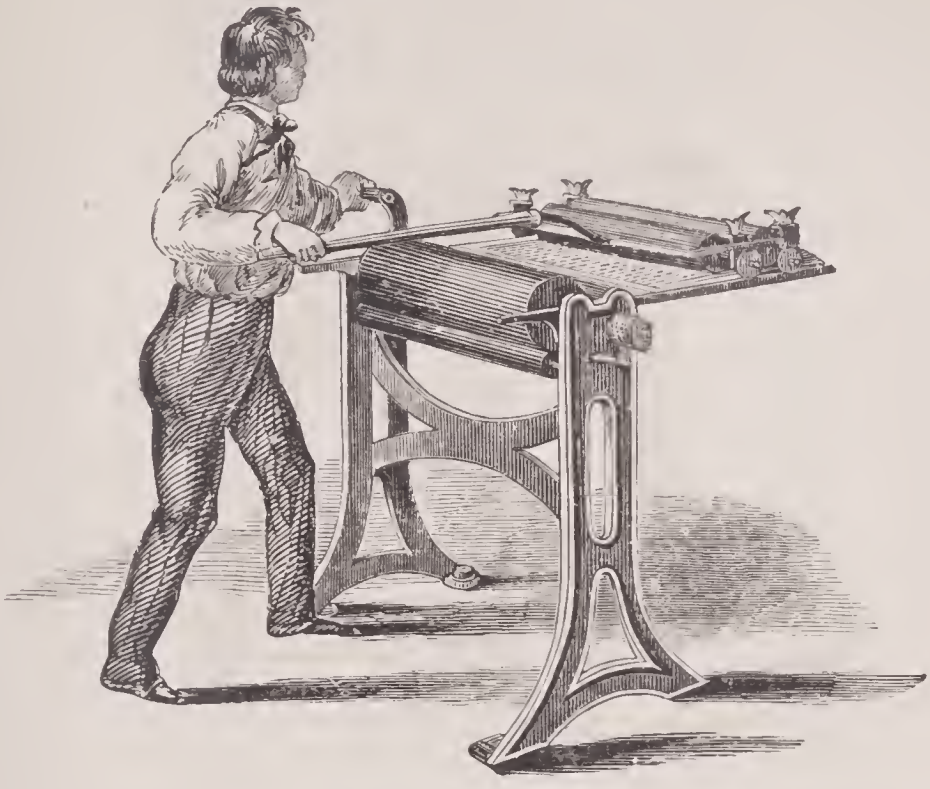
Foolscap	$85.00	Imperial, Nos. 1 and 2.	$115.00
Medium	95.00	Imperial, Nos. 3, 4, and 5,	130.00
Super Royal	105.00	Boxing and Carting,	2.50

DIRECTIONS FOR PUTTING UP.

The machine must be taken from the box in a careful manner, and each part cleaned and laid by itself. Be careful not to derange any of the parts that are already connected.

Commence putting the machine together by taking the two side frames and cross pieces, and bolting them together as marked; then put in the piece marked R. Hoe & Co. across the top, and screw that fast. Put the cloth roller in its place, hold it back against the springs while the three inch distributing roller is put in and screwed fast with the bolts for that purpose. The back shaft, with levers attached, should next be put in its place, the caps screwed down, and the weights put on by bearing down the ends of the levers that the chains are hooked to, until the opposite end is sufficiently raised; slide them on as marked, make them fast, and lower them carefully on to the stud that is screwed to the side frame for that purpose. Then hook the chains to the levers as marked, connect the opposite end of the leather cord to the shaft on the distributing roller, by putting it through the hole from the side marked with a point, until it comes to a piece of twine that is tied around it; then turn the set screw in the end of the shaft, and make it fast. The roller carriage should next be attached to the lever on the weight shaft, and placed upon its bearings, and the sliding rod, that works through a projection of the same piece, put in its place, which prevents the carriage from running out. The fountain can now be put into its place without disturbing any of the parts that are adjusted. Put the counter balance on, so that the two dots shall come together, and make it fast by turning the set screw in the lever.

The machine must be placed behind the press as near to the bed as possible, and allow the bed to pass without touching; two wrought iron bearers are to be laid one across each end of the bed, exactly the proper distance apart, so as to receive the wheels of the roller carriage. When it is required to work with an old press, it will be necessary to cut notches through the corner irons on the side towards the machine, to receive the bearers; but when the press and inker are ordered together the corner irons are fitted for the bearers, and you have only to place them in the notches. The machine must be leveled up so that the two projecting pieces, on which the wheels of the roller carriage rest, shall be exactly on the same level as the bearers on the bed of the press; the machine must stand parallel with the bed, so that the wheels of the roller carriage will roll across and back without running off the bearers.



R. Hoe & Co's Improved Inking Apparatus for the Hand Press.

With vibrating cylinder, railway, and carriage to work one ink roller,		With vibrating cylinder, railway, and carriage to work two ink rollers,	
Foolscap	$32.50	Foolscap	$39.00
Medium	35.00	Medium	42.00
Super Royal	37.50	Super Royal	44.50
Imperial, Nos. 1, 2, 3, and 4,	40.00	Imperial, Nos, 1, 2, 3, and 4,	47 00
" " 5 and 6	45.00	" " 5 and 6	52.00

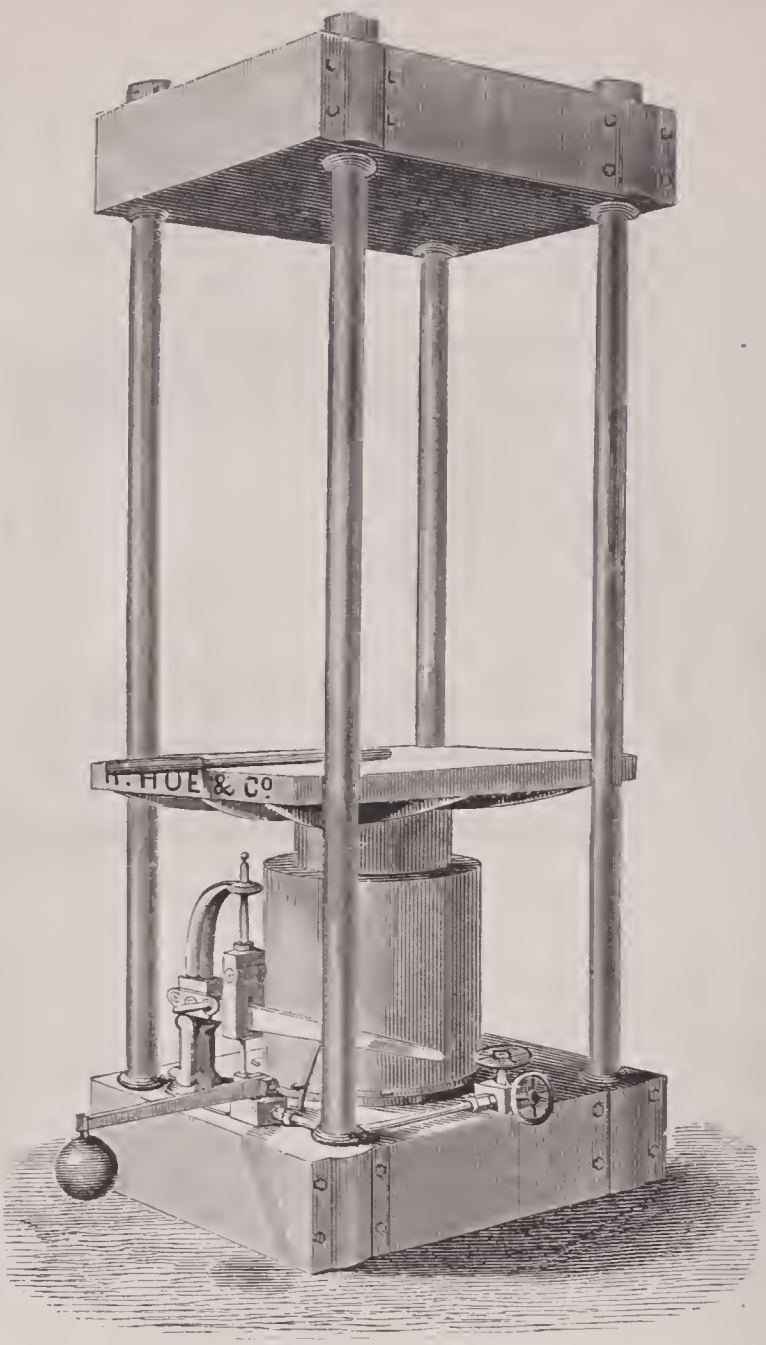
Boxing and Carting, $2.

DESCRIPTION.

THE large distributing cylinder vibrates. There are two rollers* to ink the form, moving in a carriage with four wheels. The wheels on one end are plain, those on the other have a projecting flange in the middle of the rim. Two wrought iron rails are to lie on the bed, outside of the chase: one of them having a groove cut in the top of it, to receive the projecting flanges on one pair of the wheels, the other level on the surface. Projecting from the distributor frame are two short rails, on which the wheels rest while the rollers are receiving ink from the distributing cylinder. The machine must be set up behind the press so that the short rails on it shall agree exactly with the rails on the bed of the press when it is run out, both in height and width. The journal boxes in which the inking rollers run have adjusting screws to regulate them, so that they may bear more or less on the type, as circumstances may require.

For prices of ordinary rollers, see page 3.

* Unless the order be for one roller only.



R. Hoe & Co's Hydrostatic Press.

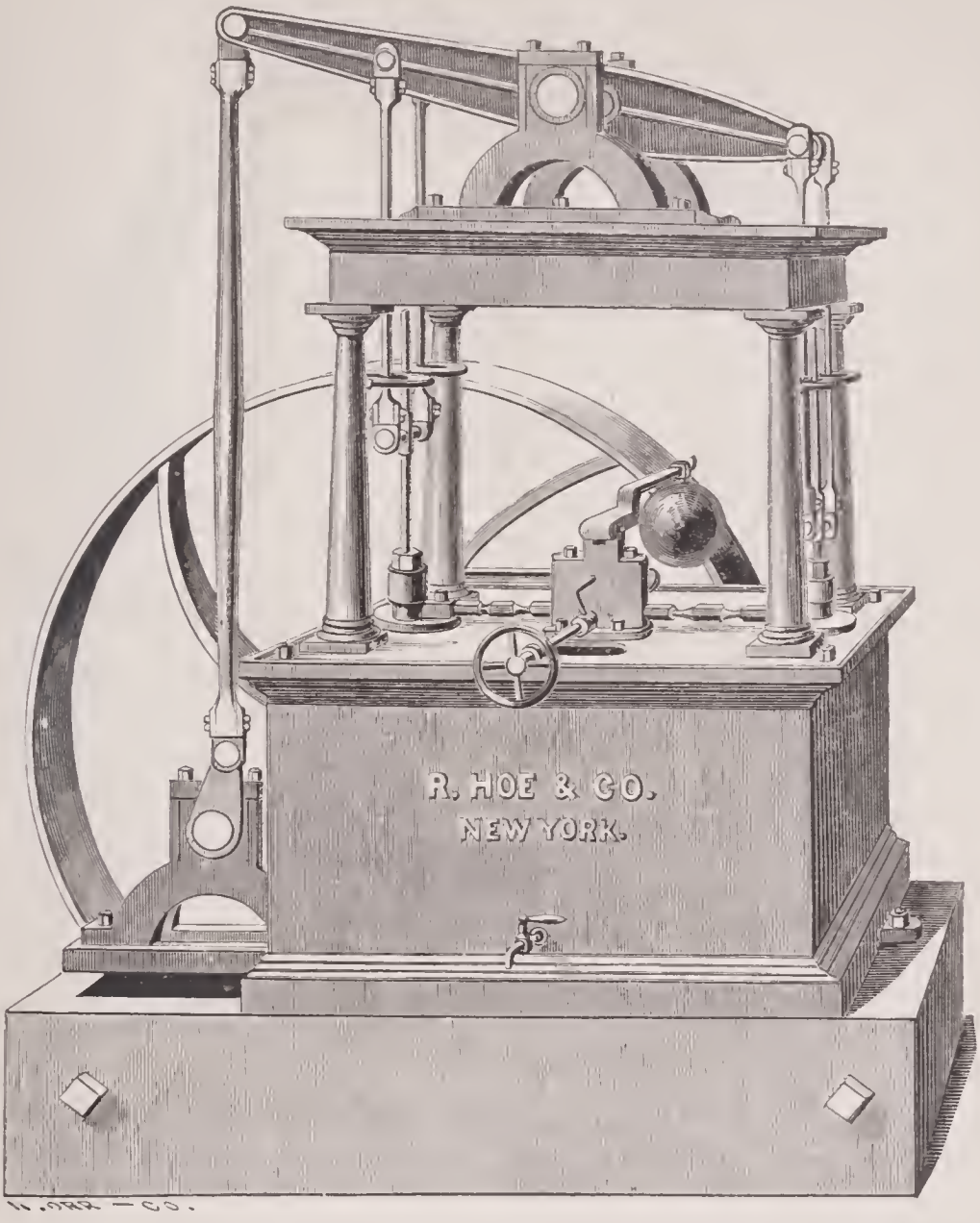
On the introduction of cylinder presses and steam power for Book and Job Printing, the screw standing press was found to be inadequate to the task of pressing the printed sheets: hence the introduction of the Hydrostatic Press for that purpose. We for several years made them with *cast* iron cylinders, and they answered well for sheets as large as super royal: but now, when most of the book printing is done on paper as large as double medium, and some even as large as quadruple super royal, we have found it indispensably necessary to make the cylinders of solid WROUGHT iron.

SIZES AND PRICES.

Diam. of Ram.	Size of Platen.	Space.	Price.
5 inches,	24 × 36 ins.	4 feet....	$400
6 "	25 × 37 "	4 "	500
7 "	25 × 38 "	4 " 6 ins.	600
8 "	26 × 40 "	4 " 6 "	700
9 inches.	27 × 42 ins.	5 feet....	$950
10 "	28 × 44 "	5 ft. 6 ins.	1,050
12 "	32 × 46 "	6 feet....	1,250

For single pump on base of the press, $100
" " " on separate cistern, 150
" double " " " " 250

For double horizontal power pumps, $350
" " vertical beam " " 550
Other sizes made to order.

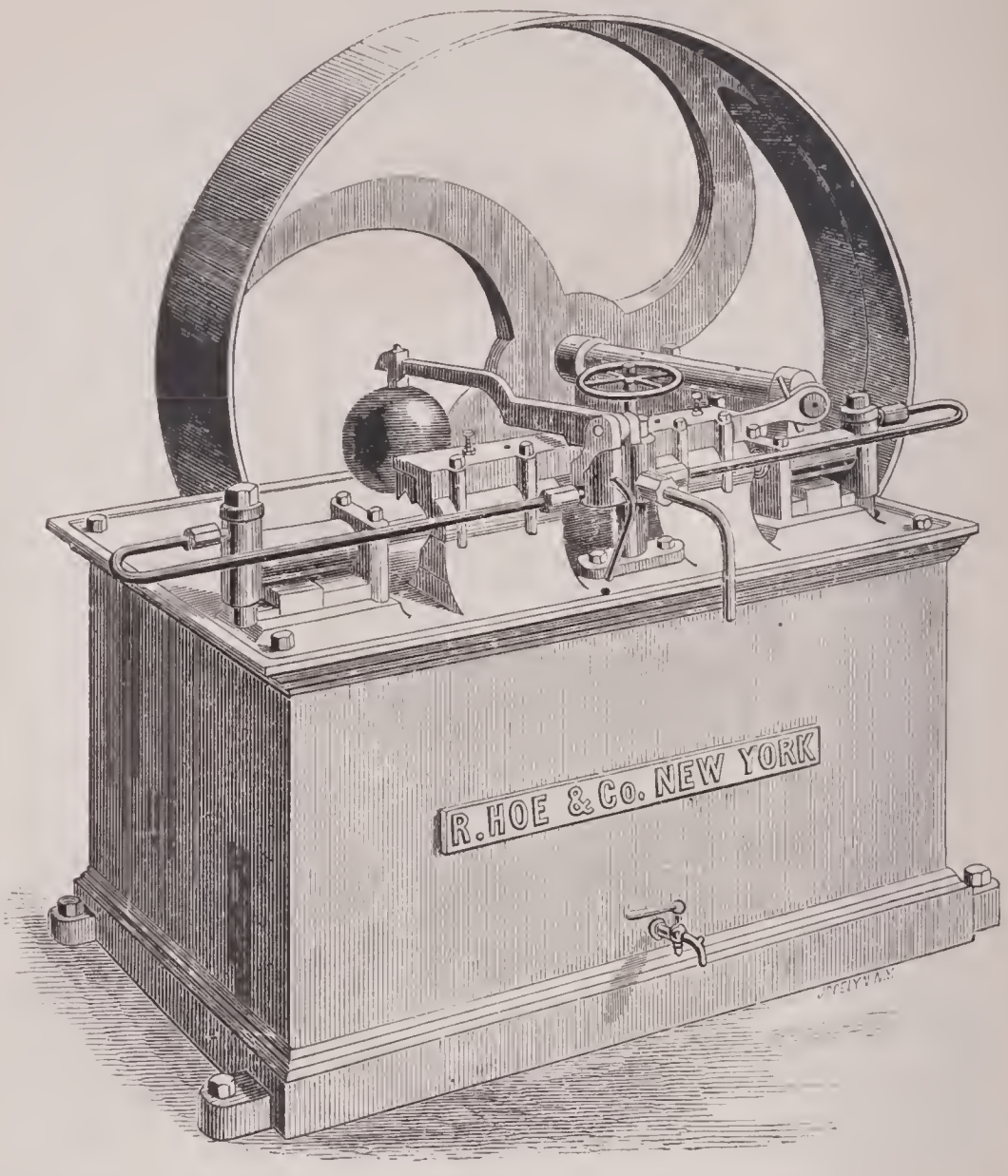


R. Hoe & Co's Vertical Hydrostatic Steam Pumps.

In this arrangement there are two vertical pumps fixed, one at each end, on the cover of a water cistern, with a suction pipe furnished with a filter reaching down into the water. They are operated by an overhead working beam, supported by columns and entablature, that receives its vibratory motion by a connecting rod from a crank placed at one end of the machine. The driving pulley is fixed to the crank shaft so that the pumps are worked without the intervention of gearing.

Any number of presses may be operated by one set of pumps worked by either hand or steam power, a main pipe with a branch leading to each press. This branch must be furnished with a stop-cock, so that when the ram is pumped up, it can be shut off the main pipe and stand as long as desired. In the meantime the pumps may be operating other presses in a similar manner.

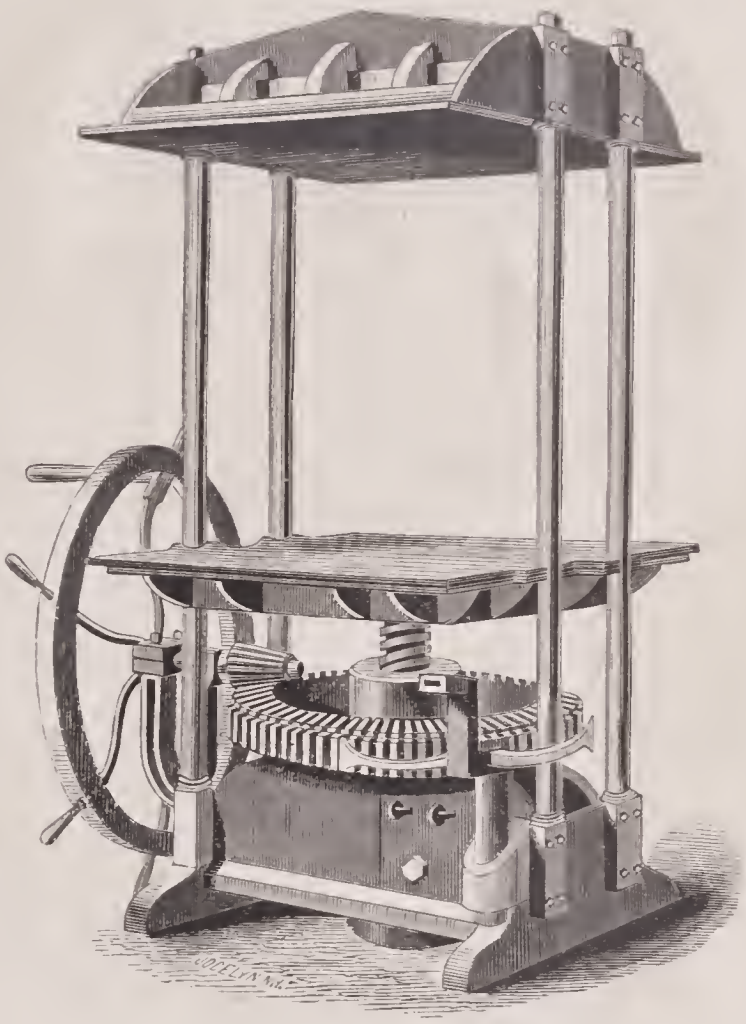
Price, $500.



R. Hoe & Co's Horizontal Hydrostatic Steam Pump.

This is a simpler and more direct acting form of pump than the preceding. The two pumps are placed horizontally and facing each other on the cover of the water cistern. The plungers are fixed one in each end of a sliding head placed between the pumps, and move in an adjustable guide block. The sliding head receives its motion by a connecting rod from a crank at one end of the cistern. The driving pulley is fixed on the outer end of the crank shaft and overhangs the cistern. The plungers and safety valve are packed in the same manner as the vertical pumps, and may also be made to operate several presses. By an improved form of joint, no packing whatever is used in joining together the various pipes and connections, thus greatly simplifying the arrangement.

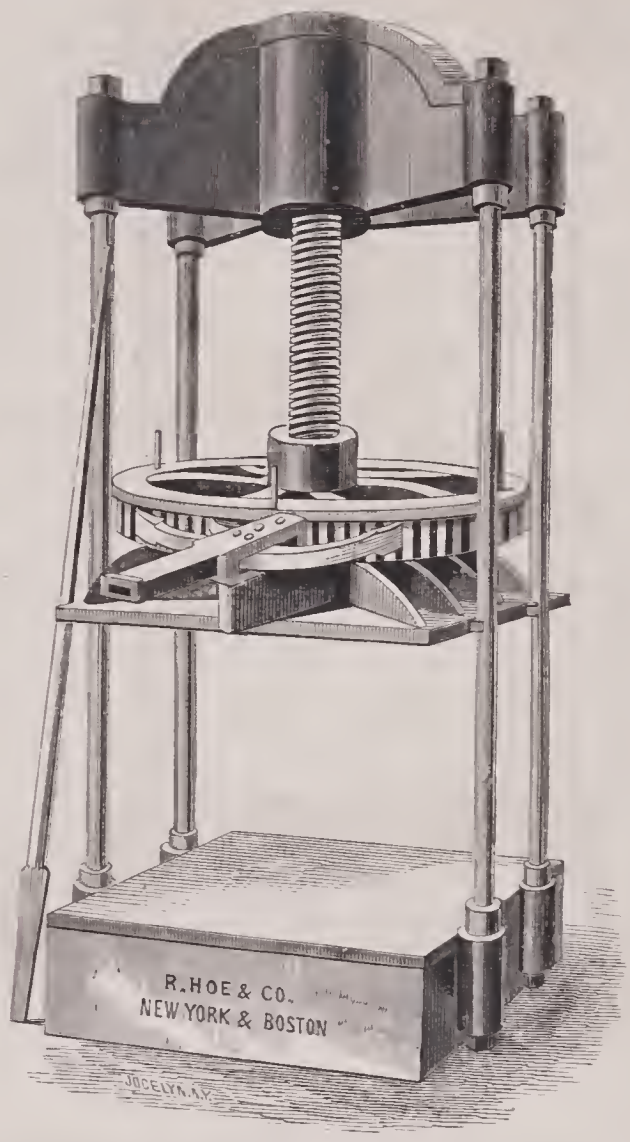
Price, $350.



R. Hoe & Co's Improved Geared Standing Press.

This press is very simple yet powerfully geared. In point of power it ranks next to the Hydrostatic. When filled, it is first run up rapidly, so far as the pressure will permit, by the crank in an arm of the fly-wheel; next by the handles in the rim of the wheel; and, finally, by a powerful lever operating the pawls that work into the teeth on the periphery of the large wheel under the press.

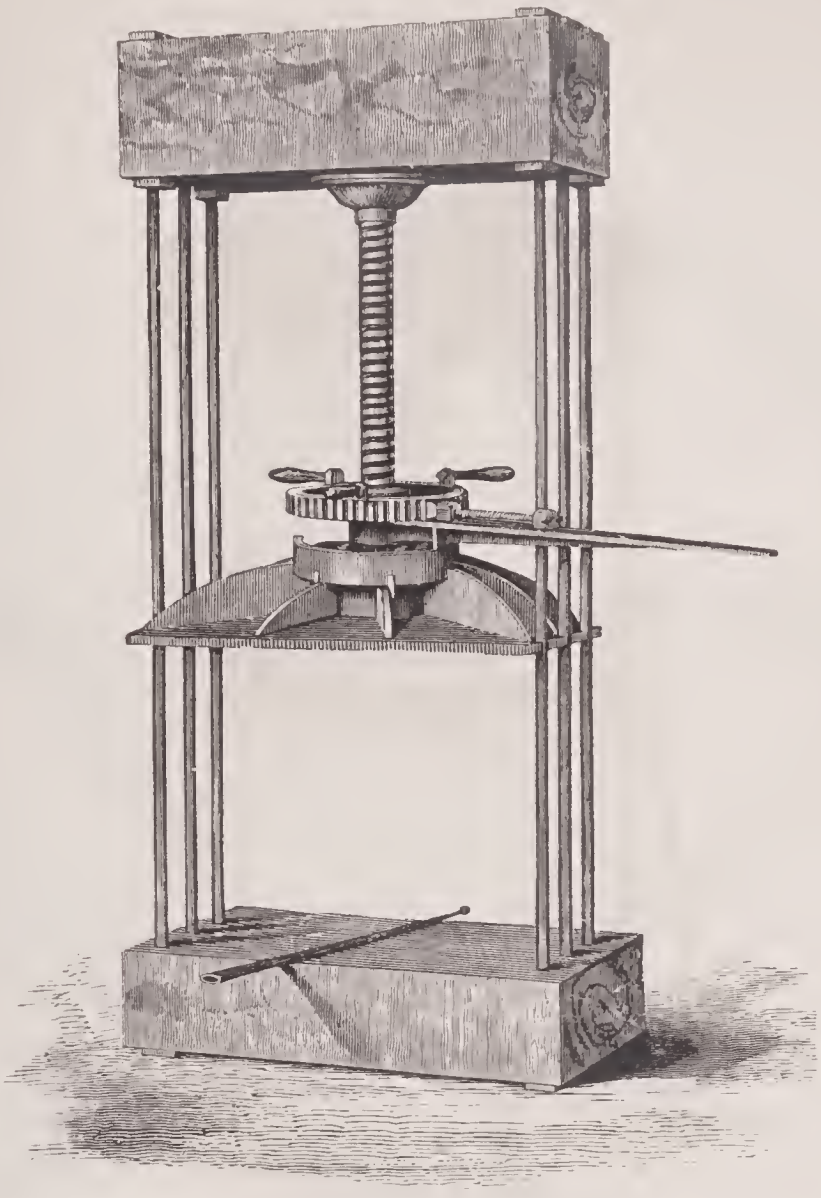
Size of Platen, 32 × 42 inches; Screw, 5¼ inches. Price $350



R. Hoe & Co's Improved Iron Standing Press.

THIS is one of the simplest forms of Standing Press, and although not as powerful as the preceding one, is yet very efficient for all ordinary work. When the press is charged, the platen is run down as far as the pressure will permit, by means of pins in the wheel, and the pressure is then completed by using the bar in the socket lever.

Size of Platen, 22½ × 29, Screw 3½ in., $225.



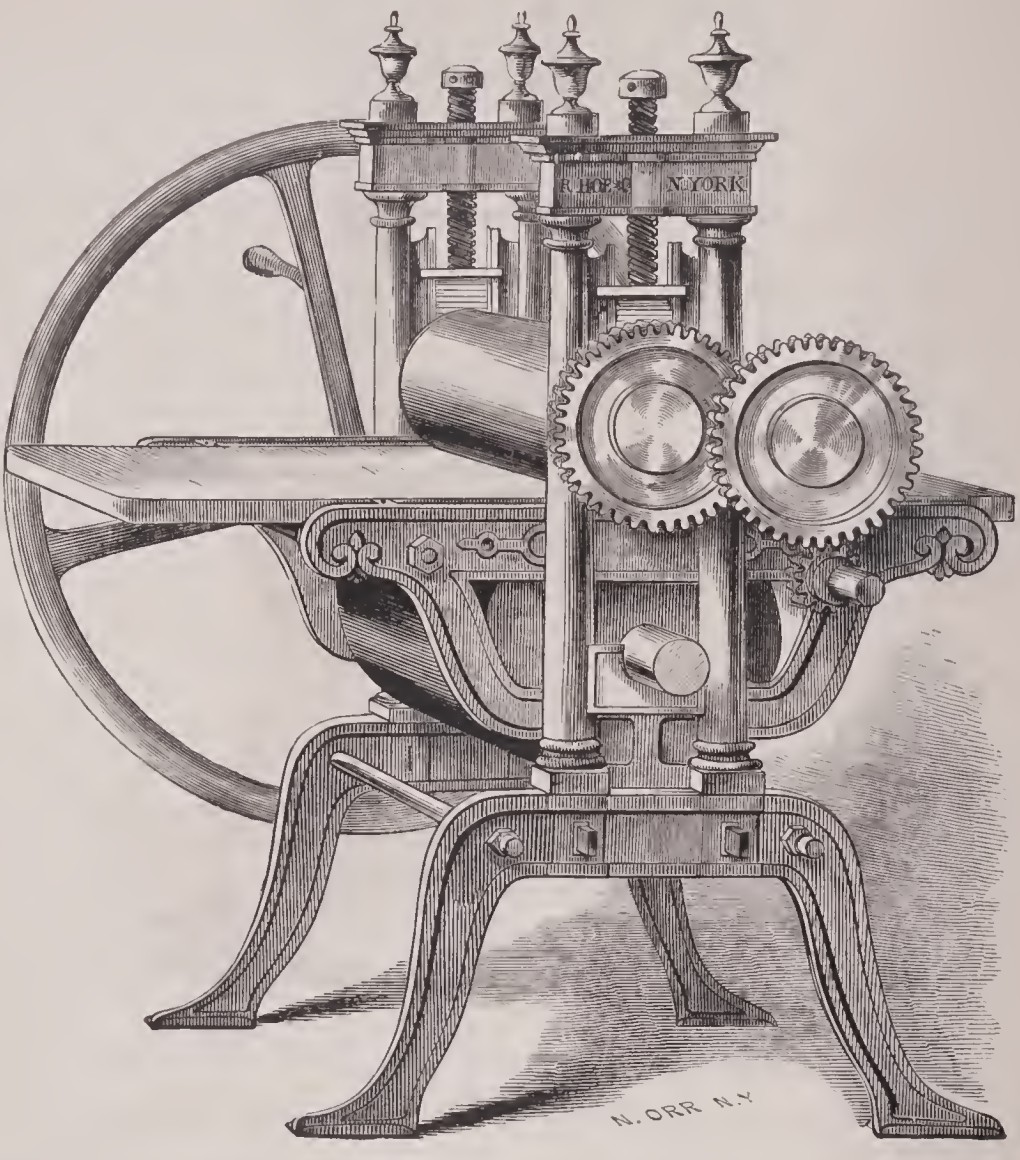
R. Hoe & Co's Improved Screw Standing Press.

ABOVE is shown a Standing Press with a wrought-iron fagoted serew, with hardened steel point, composition box, and cast-iron platen planed true on the the face; it is operated by a ratchet wheel, pawl and lever.

The head and bottom are made of the best white oak timber, well seasoned, and secured by iron plates, bolts and nuts, and connected by wrought-iron bars, with serews and nuts above and below.

SIZES AND PRICES.

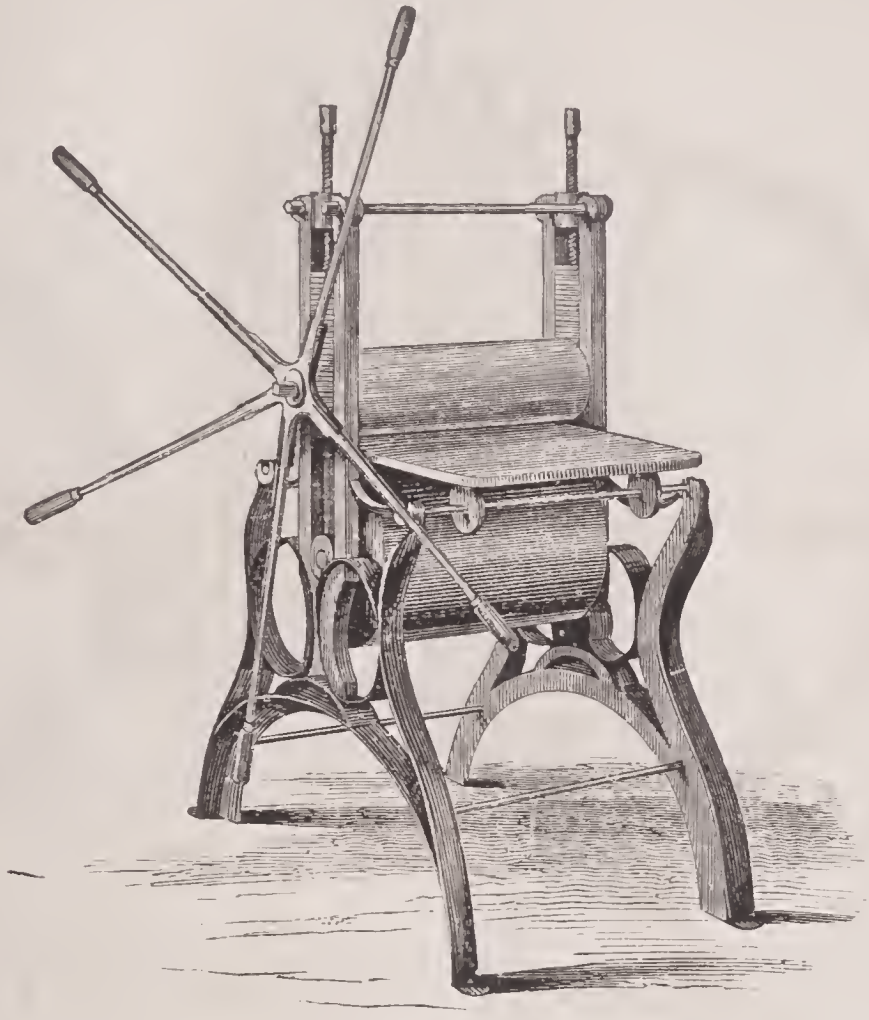
2¼	inch	Screw,	spaee	between	rods	28	inches.....	$100
3	"	"	"	"	"	30¼	"	125
3½	"	"	"	"	"	31¾	"	150
4	"	"	"	"	"	33¼	"	175



R. Hoe & Co's Geared Copperplate Press.

This is a heavy and powerful press, of a new style, capable of printing the largest sized plates. The frame is strengthened by internal wrought iron tension rods. The press is double geared, and the bed is guided by side anti-friction rollers. It has a fly wheel and crank for working by hand, or it may be run by steam power.

Bed 34 × 60	$600.00
" 34 × 66	750.00



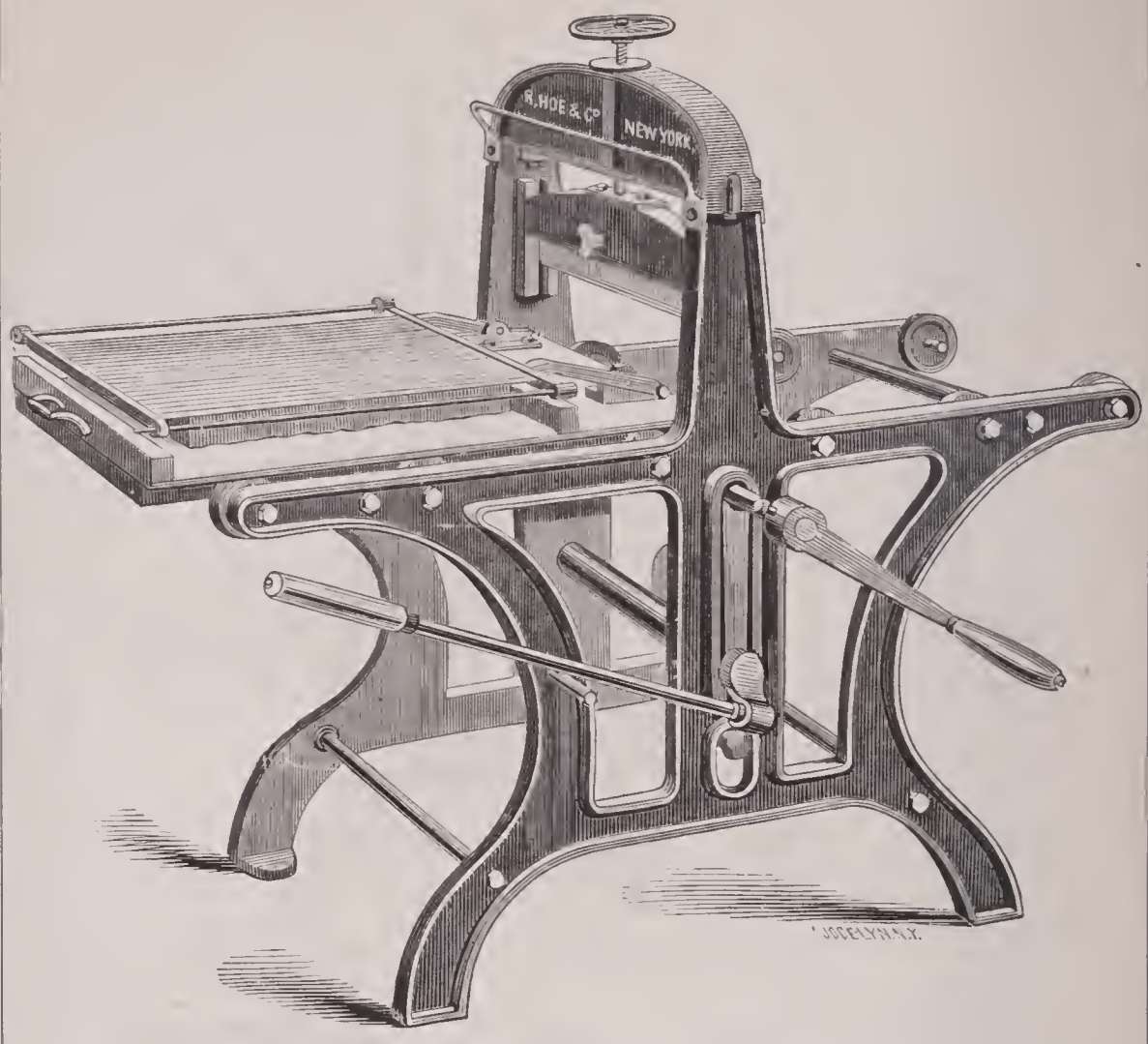
R. Hoe & Co's Iron Copperplate Press.

Bed 10 inches wide		$ 90	Bed 24 inches wide		$200
" 12	"	100	" 26	"	225
" 15	"	115	" 28	"	255
" 18	"	145	" 30	"	285
" 21	"	175			

The side frames, cylinders and bed are made of cast-iron; the cylinders are turned, and the bed planed perfectly true. The shafts through the cylinders, the braces, arms and screws, are of wrought iron; the bearings of composition.

Every material connected with Copper-plate Printing supplied.

See Estimate on page 9.



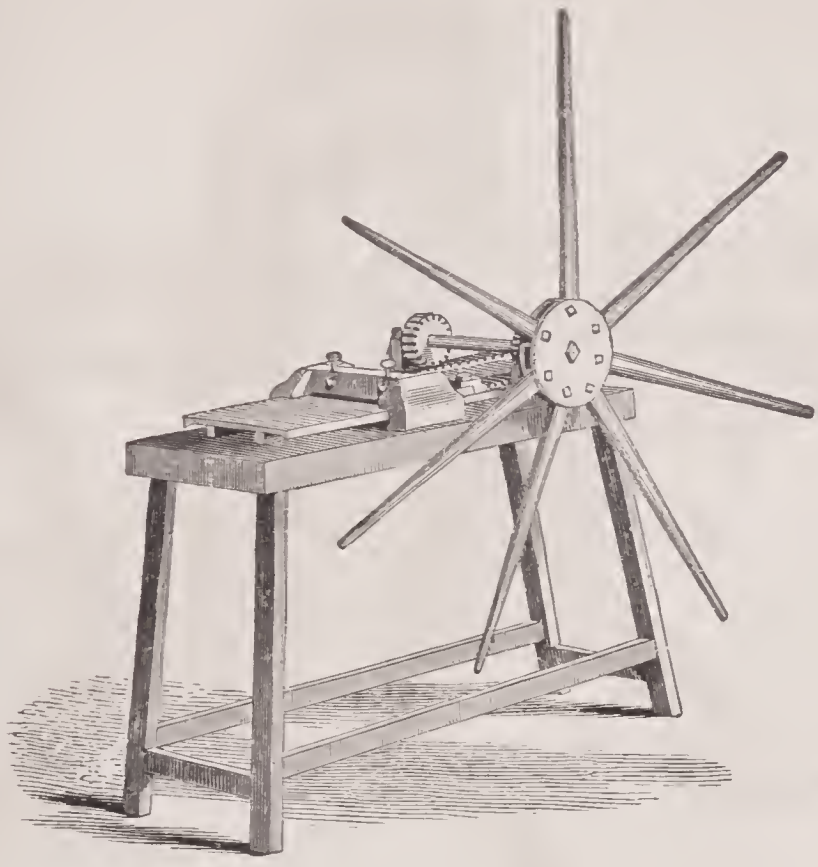
R. Hoe & Co's New Style Lithographic Press.

Our new style Lithographic Press is, we think, superior to any other in use. It is made of the best materials, is strong, simple and convenient, and works with great ease. The roller under the bed is of wrought iron, and in the larger-sized presses is geared, but is so arranged that it may be used with or without the gearing. The bed is made sufficiently long to always cover the roller, and thus proteets it from grease from the scraper, or dirt, and at the same time causes the bed to run smoother.

SIZES AND PRICES.

Size of Bed.	Size of Stone.	Price.
20 × 26	18 × 24	$125.00
24 × 32	22 × 30	150.00
28 × 40	26 × 37	175.00
32 × 46	30 × 43	200.00
36 × 52	34 × 48	225 00
42 × 60	39 × 56	300.00

See Estimate on page 9.

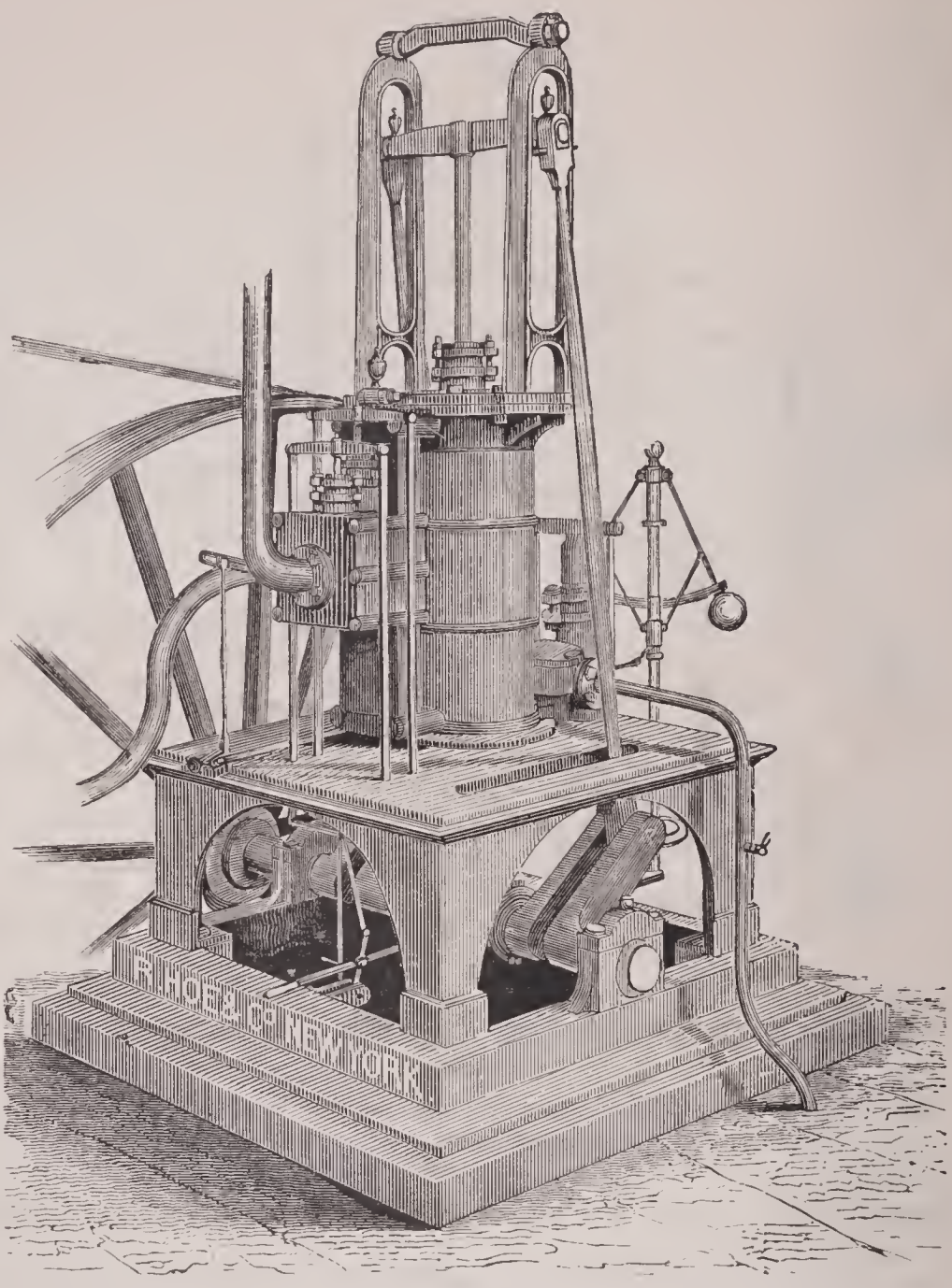


R. Hoe & Co's Stereotype Shaving, or Planing Machine.

THIS Machine, for *thicknessing* stereotype plates, is made of wrought and cast iron, and rests upon a wooden bench. It consists of a cast iron bed-plate planed perfectly true on the face and edges, with bearings projecting above to receive a wrought iron shaft with two case-hardened pinions on it, between the bearings, and a hand windlass, with arms outside, on one end. A sliding head, with a knife attached, that can be adjusted by set screws, has two racks attached to it, by which it is impelled by means of the windlass and pinions forward and backward over the stereotype plate (which is placed on the bed), until it is reduced to the required thickness.

PRICE, $100. EXTRA HEAD, $25.

Larger sizes made to order.



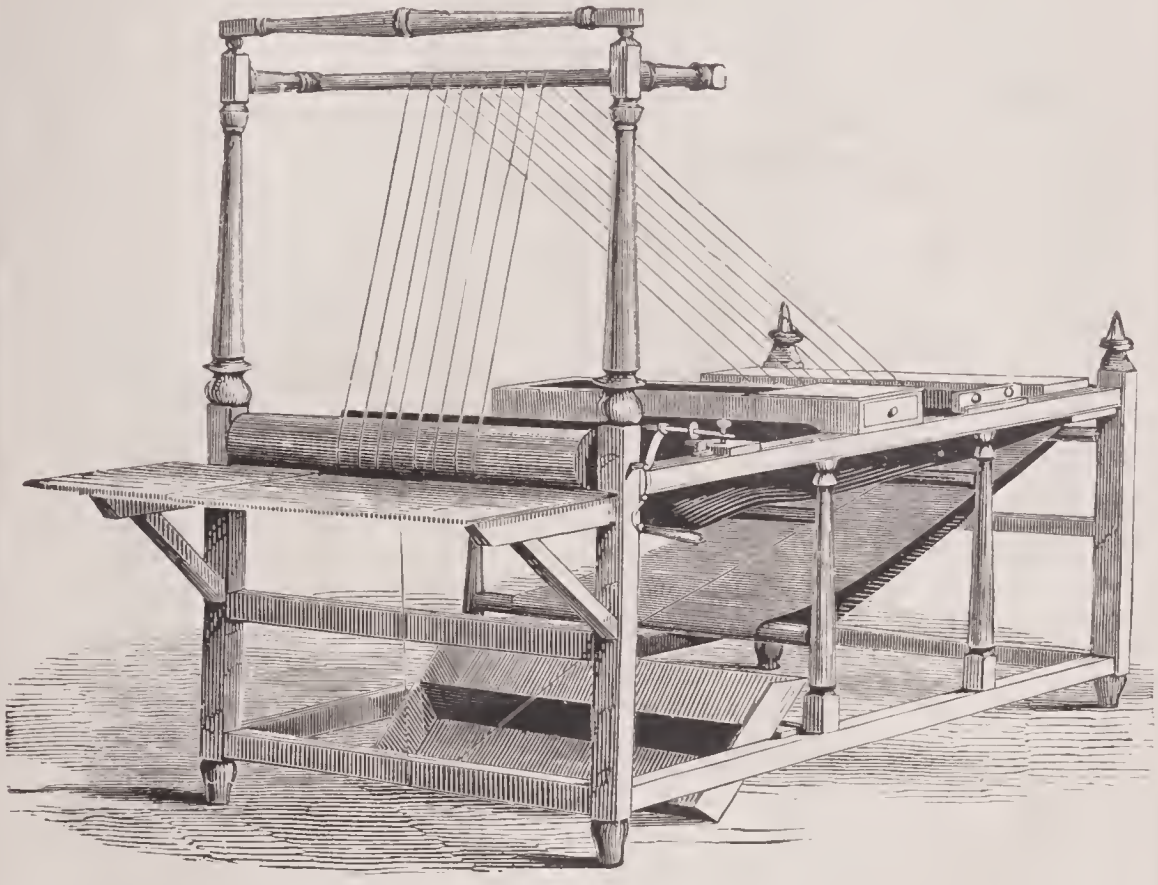
R. Hoe & Co's Vertical Steam Engine.

THIS engraving represents a high pressure steam-engine, which, as it occupies but little space, is admirably adapted to the impelling of machinery for printing, and other manufacturing purposes, where room is valuable. It is remarkable for symmetrical proportions, compactness, and great strength.

Fifteen horse power, cylinder	11	in.	diameter,	22	in.	stroke	.....	$1.600
Ten	"	"	9	"	"	22	"	"	.....	1.350
Eight	"	"	8	"	"	16	"	"	.....	1.200
Five	"	"	6½	"	"	16	"	"	.....	1.000

The above prices do not include boiler nor pipes.
Locomotive, flue, or plain cylinder boiler, for the same, furnished to order.
The pedestal of 5 horse engine is 3 feet 2 inches by 2 feet 10 inches.
The band fly-wheel of the same, is 5 feet 9 in. diameter, and weighs 1700 lbs.
The pedestal of 10 horse engine is 4 feet by 3 feet 5 inches.
The band fly-wheel of the same, is 7 feet 3 in. diameter, and weighs 2,750 lbs.

TERMS OF PAYMENT.—One-half cash, one-half six months for satisfactory note. 2½ per cent. discount from the whole bill if all is paid in cash.

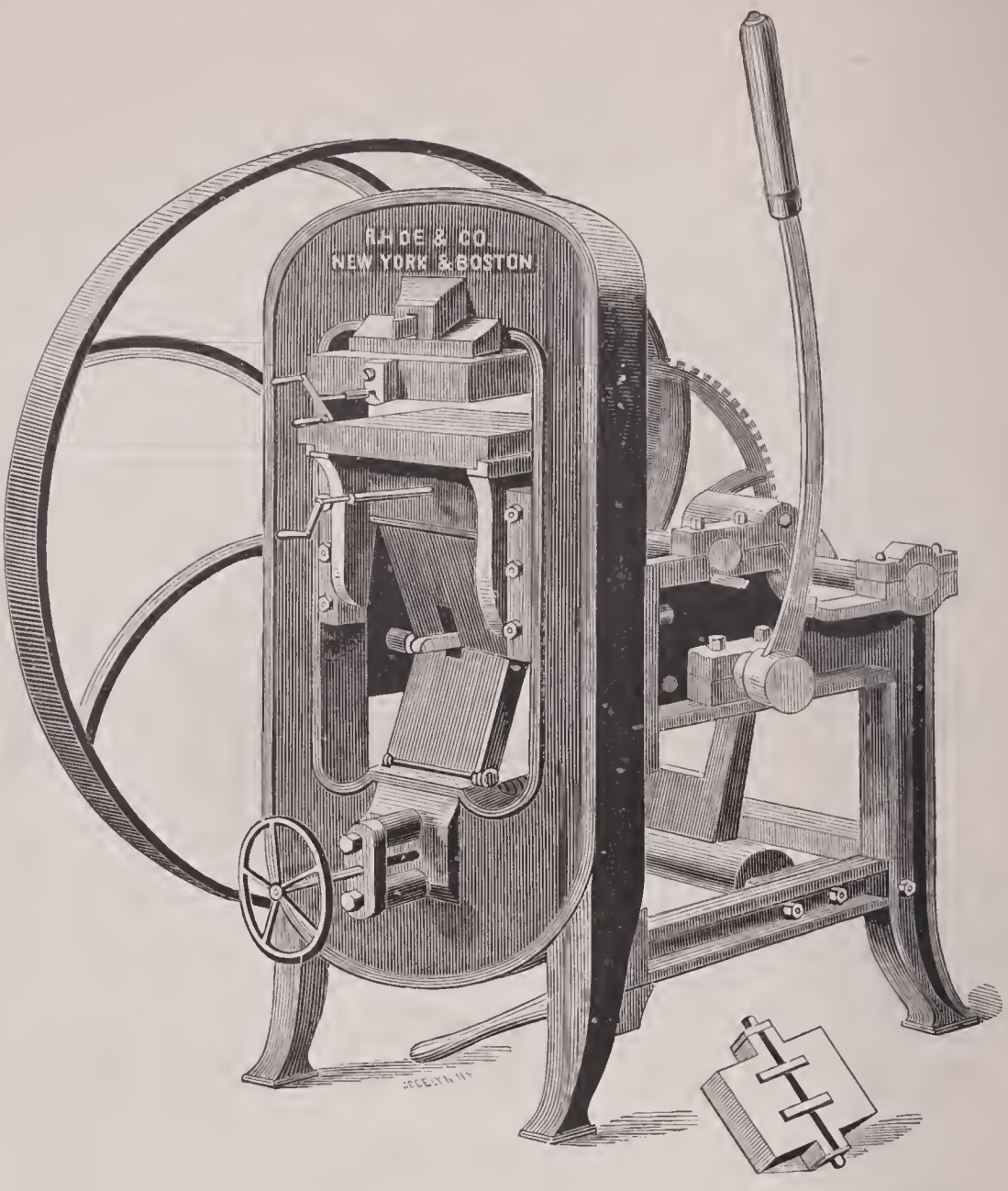


R. Hoe & Co's

Ruling Machine for Blank Books, Bills, Letters, &c.

THIS machine is universally allowed to be the best in use, for the purpose. The principal cylinders are made of the best mahogany, staved upon iron shafts; the bearings are all made of brass, accurately fitted. The two series of cylinders are, with their cloths, made adjustable by set screws. No pains or expense is spared in selecting material that is well seasoned, and every way unexceptionable; and every precaution is taken to render the machine as perfect as possible.

PRICE, $150.



R. Hoe & Co's Embossing and Smashing Presses.

These machines, so well and favorably known among bookbinders, are undoubtedly the best in use for the purpose of embossing covers and compressing books. They are massive in structure, simple and efficient in operation.

No. 1. Embossing Press, is represented by cut above, with the hand lever it may be used advantageously for heavy gilding. It weighs about half a ton.

Price, with head 15 × 17 ..... $400.00
Boxing and Carting 10.00

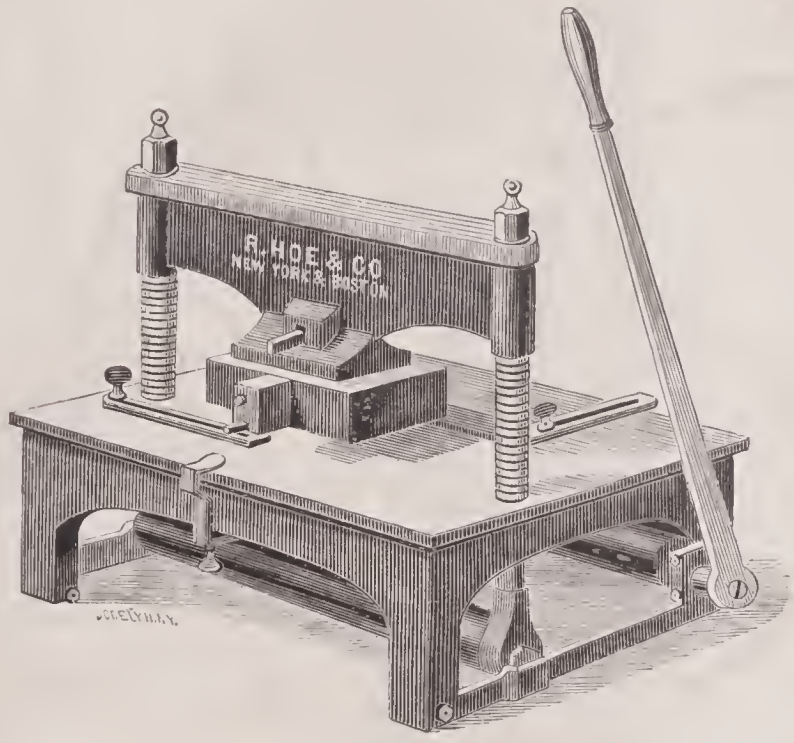
No. 2. Embossing Press, is calculated for the largest kind of embossing. In form it is similar to cut above, but is double geared and has two fly-wheels, one on each end of the driving shaft. The weight of this machine is about two tons.

Price, with head 19 × 24 ..... $800.00
Boxing and Carting 15.00

R. Hoe & Co's Smashing Machine.

This is the same machine as the Embossing Press, only it is geared to run slower and has a wider space between the head and bed. It is used for compressing books, and may be adjusted to all ordinary thicknesses. The prices, weight, etc., are the same as the Embossing Presses. Each machine is furnished with two heads, either for steam, gas, or iron heaters, as may be desired.

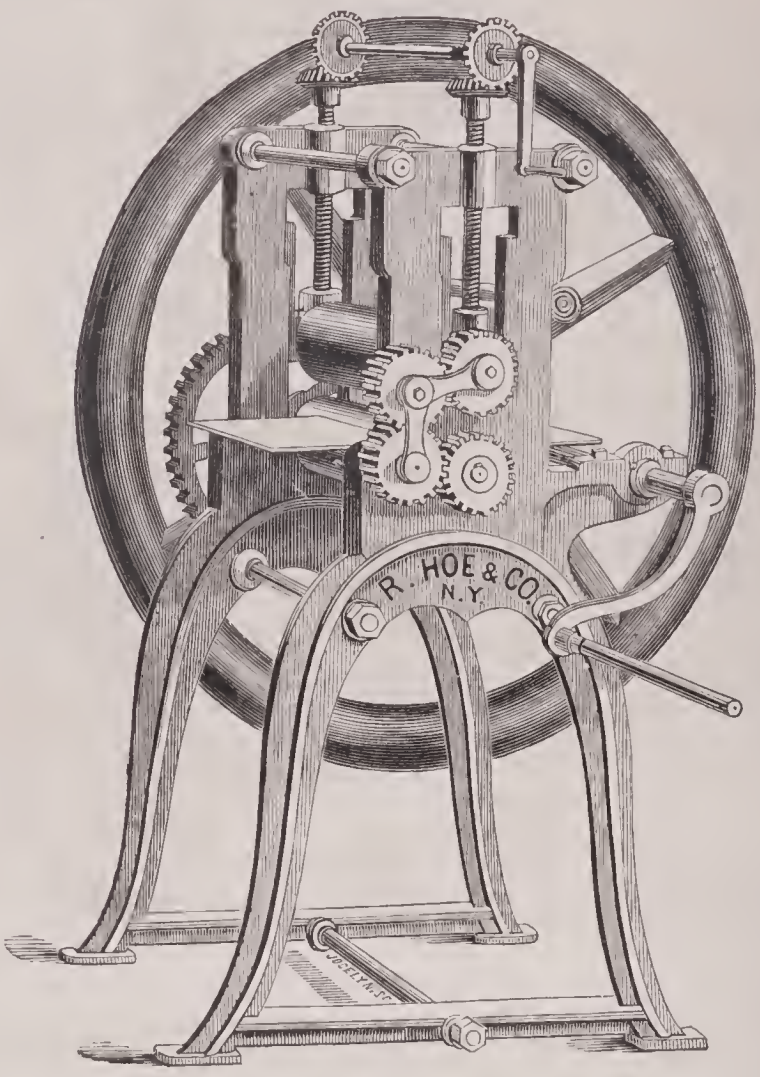
Terms of Payment.—One-half cash, one-half six months for satisfactory note. 2½ per cent. discount from the whole bill if all is paid in cash.



R. Hoe & Co's
Small Embossing, Stamping and Gilding Press.

THIS is a powerful yet very compact, simple and convenient press for bookbinders' use. It is operated by hand, the pressure being produced by compound levers similar to the celebrated Washington Hand Press. The platen can be adapted for heating either by steam, gas or heaters, and is provided with jaws for holding the die in a central position. The bed has adjustable side and end guages by which to place the work; the impression is regulated by nuts on the top of the press.

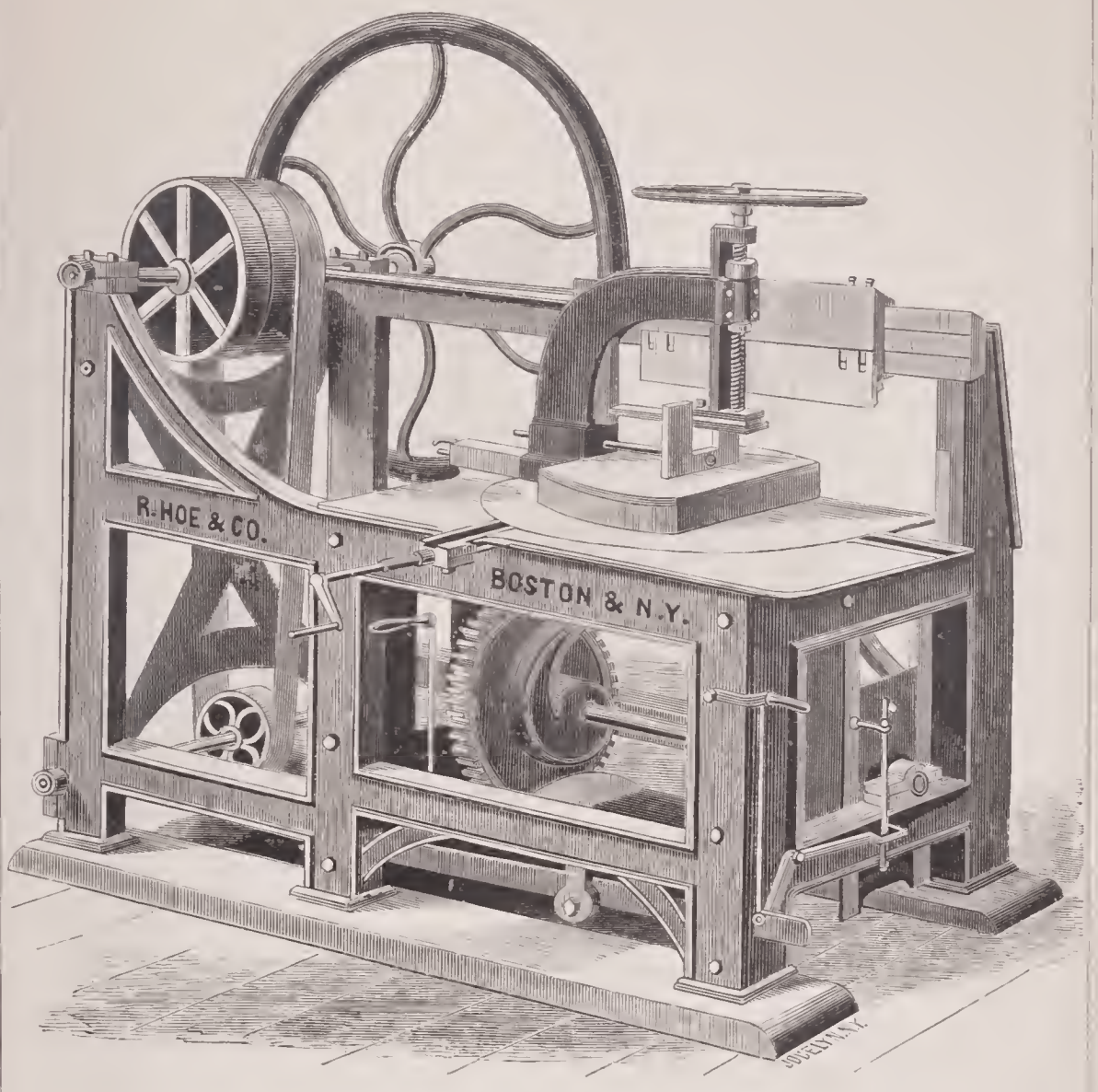
Size of Head 5 × 8 ins	$125.00
Boxing and Carting	1.25



R. Hoe & Co's Book Rolling Machine.

This machine is used by bookbinders, in place of screw and hydraulic presses, for pressing folded sheets. The work is placed on an iron table in front of the rollers, between plates of iron, pasteboard or leather, and passed through the machine as often as necessary. The adjusting screws are geared together so that the rollers are always parallel to each other. It is strongly geared, and may be run by either hand or steam power.

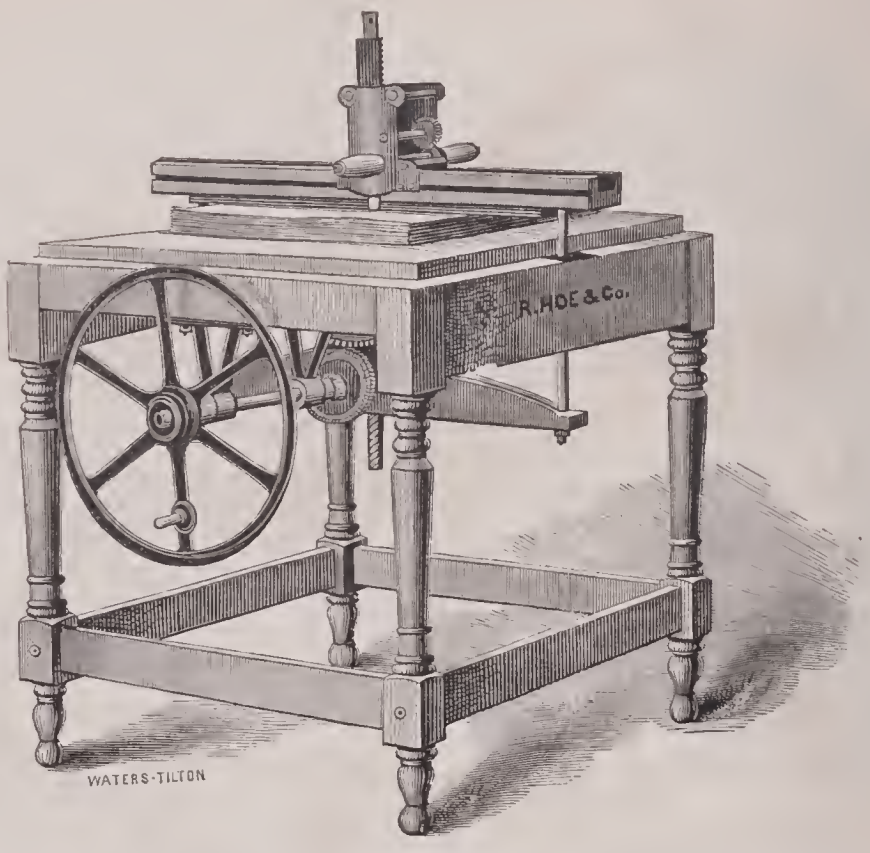
Price, $250.



R. Hoe & Co's Patent Book and Paper Trimming Machine.

The knife used in this machine is 21 inches long and has a short vibratory movement, thus combining the advantages of the long stationary knife with those of the ordinary plough. The work to be trimmed is placed against the adjustable guide on the bed of the press, in front of the knife, and is compressed by the wheel and screw. The table on which the press stands, is adjustable in all directions, and is also self-acting, so that when thrown into gear it rises to the required height, disengages itself, thus preventing injury to the knife, and then drops down to its original position. Three sides of the work can be successively presented to the action of the knife by simply turning the press to the quarter and half-turn stops. The machine can be worked either by hand or steam power, and can be easily adjusted to cut any size from 3 to 18 inches long and from 1 to 15 inches wide.

Price, $600. Boxing and Carting extra.



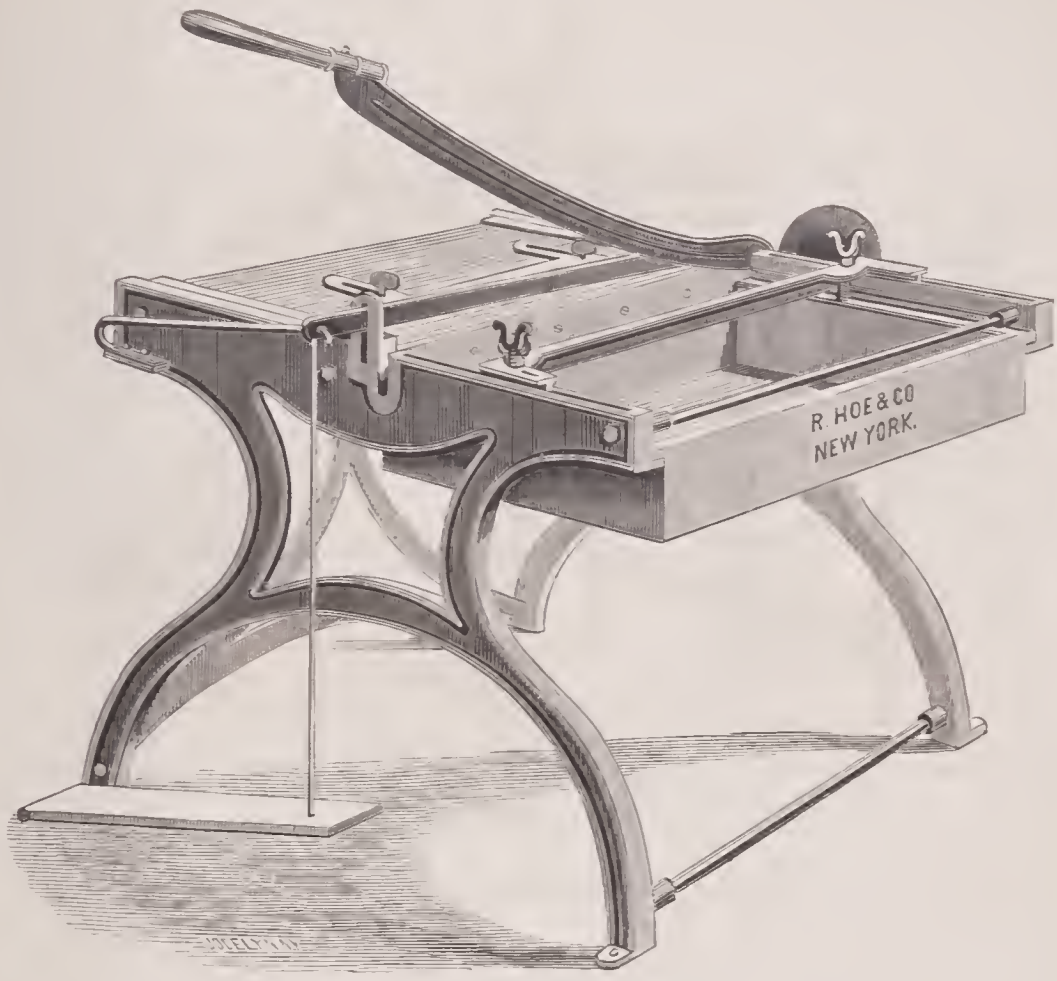
R. Hoe & Co's Improved Paper Cutting Machine.

This cut represents a machine that is used by printers and others for cutting paper. The working portion is made of wrought and east-iron, steel and brass; and is supported by a neat and substantial hardwood table. The knife is attached to a vertical slide with a rack on one edge of it; this is moved up and down by a pinion that turns in bearings on a head or carriage which slides horizontally over the table. The parts above and below the table are connected by wrought-iron rods and a screw.

The horizontal slide is raised by the hand-wheel attached to a shaft which is connected with the screw by two bevel pinions. This arrangement is very convenient and powerful; the horizontal slide, being raised so as to admit the paper under it, is screwed down firmly on the top of the table; the operator takes hold of the handles which are fastened on each end of the pinion-shaft, and slides the carriage with the knife in it across the paper, at the same time turning the pinion so as to force the knife down and cut the paper.

It will cut paper 27 inches wide.

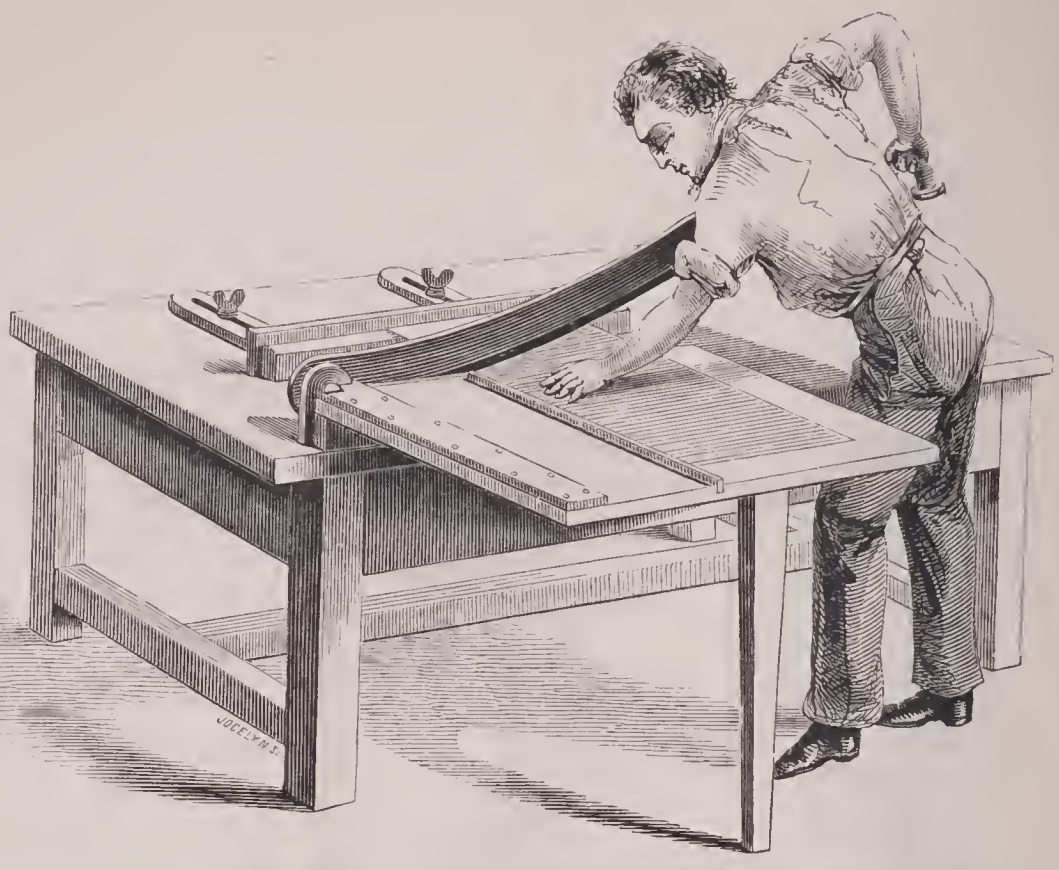
Price, $40.



R. Hoe & Co's
Shears and Table for Cutting Binders' Mill Board.

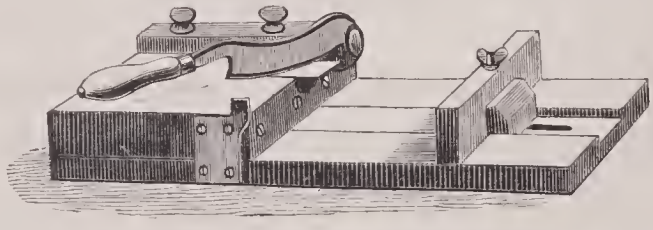
THE frame and table are made of east-iron, and are fitted up in the most substantial manner. The table and guages are planed perfeetly true. The cutters are of east-steel, and can be adjusted by set-serews, taken off to be re-ground, and when worn out they can be replaeed with but trifling expense. In addition to the usual guages, there is a spring lever suspended over the board that (when the board is placed against the guage) is brought down by the operator placing his foot on a treadle: this holds the board so firm as to preclude the possibility of its slipping. The blades of the shears are 29 in. long.

PRICE $75.



R. Hoe & Co's Shears and Table for Cutting Binders' Mill Board.

Table of wood. Shears 26 inches. PRICE, $35.

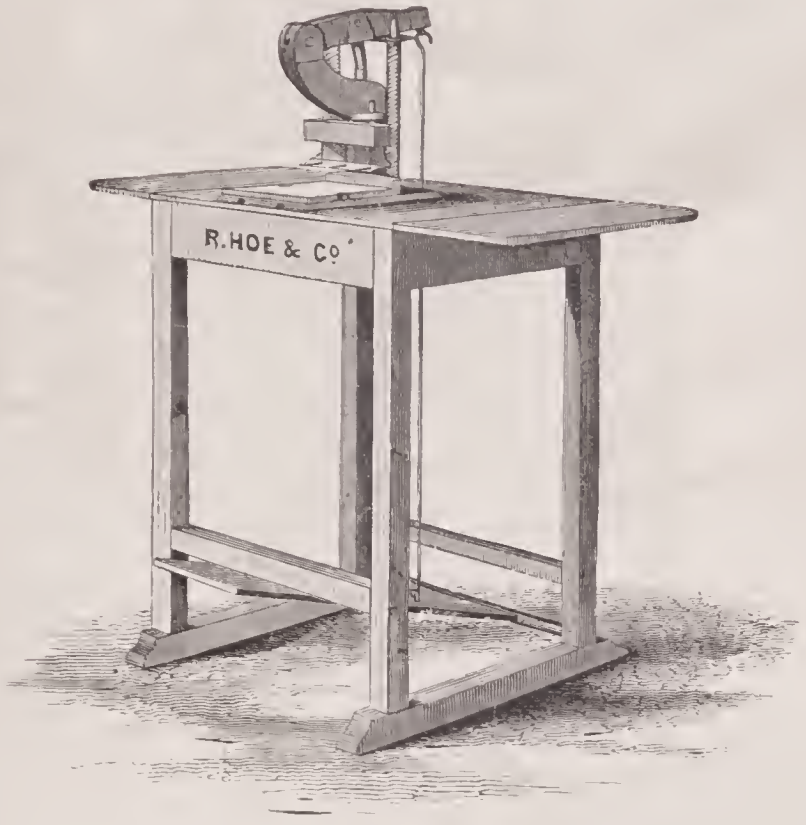


R. Hoe & Co's Card Cutter.

THE frame is of hard wood, well seasoned, and has a sliding guage and adjustable back-piece; the shears are accurately fitted, and the whole machine is substantially made and is not liable to get out of order.

SIZES AND PRICES.

With 6 inch Shears	$10.00
" 7 " "	11.00
" 8 " "	12.00
" 10 " "	15.00
" 12 " "	17.00
" 14 " "	19.00



R. Hoe & Co's Piercing Machine for Pamphlets, &c.

THE jaw or cramp which holds the needles is so made that they can be changed in position, and their number increased or diminished in a few seconds.

When the book or pamphlet is adjusted the needles are forced through it by pressing the foot on the treadle.

The machine is rapid and efficient in its operations, simple, durable and cheap.

PRICE, $35.

R. Hoe & Co's Cast-Iron Case Stands.

THESE Stands are light, handsome and strong; they can be taken to pieces as readily as wooden ones, and are more durable.

SIZES AND PRICES.

Double, with racks	$15
" without racks	12
Single	8

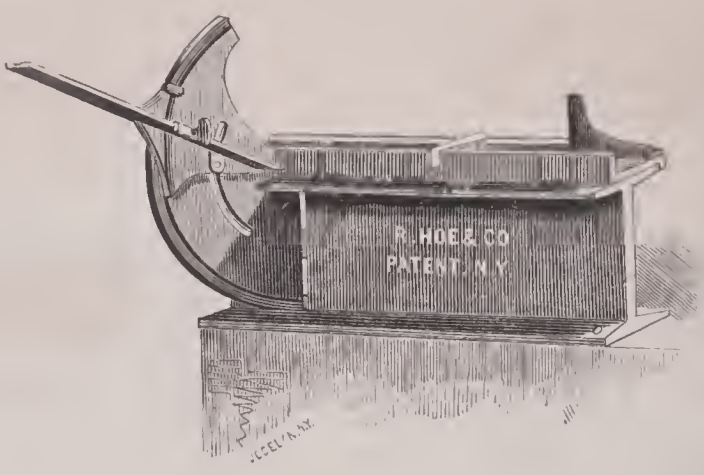
R. Hoe & Co's Cabinets.

THE above cut represents our new style of Cabinets. They are not only substantial but quite ornamental. No well organized office should be without them.

PRICES.

Cabinets with	10	pairs	full	size	cases	$30.00
"	" 10	"	⅔	"	"	26.00
"	" 8	"	⅔	"	"	20.00
"	" 6	"	⅔	"	"	15.00
"	" 15	"	½	cases.		20.00
"	" 10	"	½	"		14.00
"	" 5	"	½	"		7.00

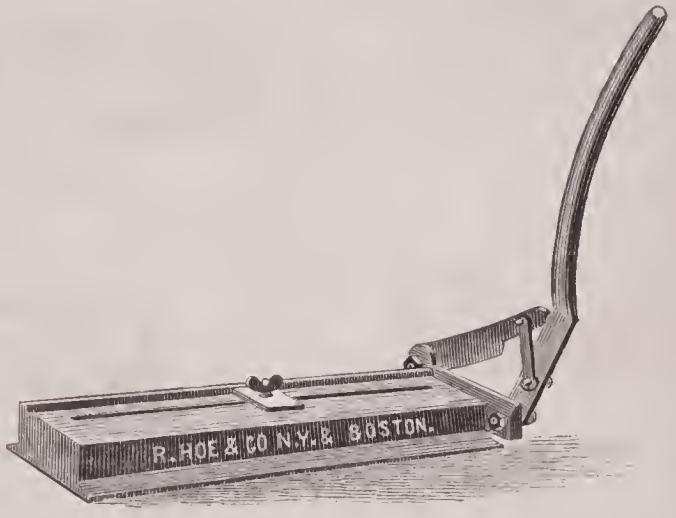
Other sizes made to order.



R. Hoe & Co's Patent Mitering Machine.

THIS Machine will miter Brass or Metal Rule to any desired angle. It is simple in its construction, easily adjusted, and will do the work with the greatest facility and neatness. The miter is made by a sharp knife, which leaves the cut edge smooth and accurate.

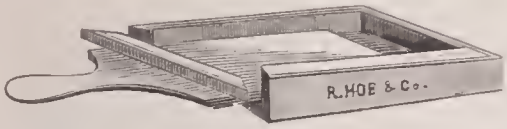
PRICE, $12.



R. Hoe & Co's Lead and Rule Cutter.

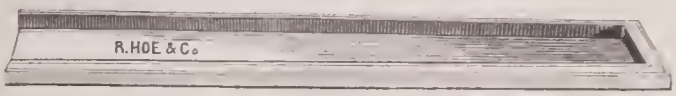
BY the combination of levers shown in the annexed engraving, great power is secured, and the operator is enabled to cut the thickest Leads or Brass Rule with little exertion.

SIZE: Bed, 15 inches long; Shears, 3 inches. PRICE, $12.



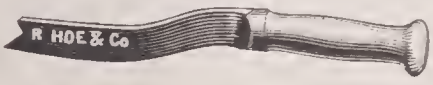
Slice Galley.

Spring Bodkin.



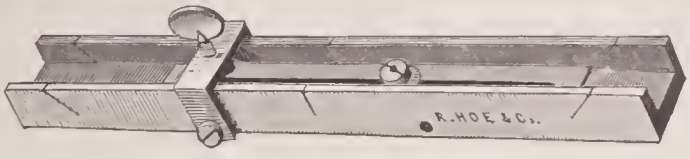
Single Brass Galley.

Proof Brush.



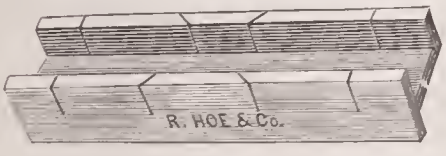
Iron Shooting Stick.

Bodkin.

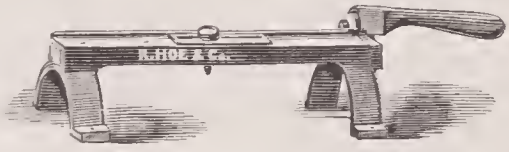


Iron Miter Box.

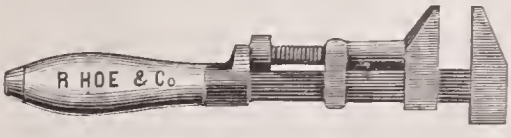
Planer.



Wood Miter Box.

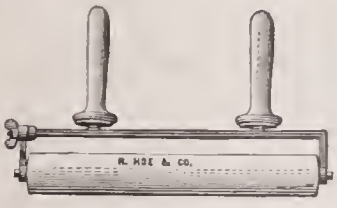


Lead Cutter.



Screw Wrench.

Composing Stick.

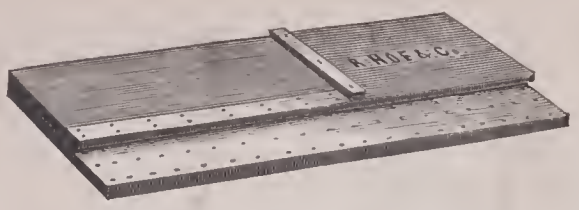


Job Roller.

Proof Roller.

Iron Bound Mallet.

For Prices, see pages 3, 4 *and* 5.



Stereotypers' Shoot Board.

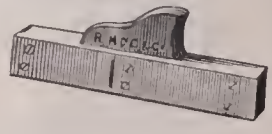
Gold Cushion.

Backing Hammer.

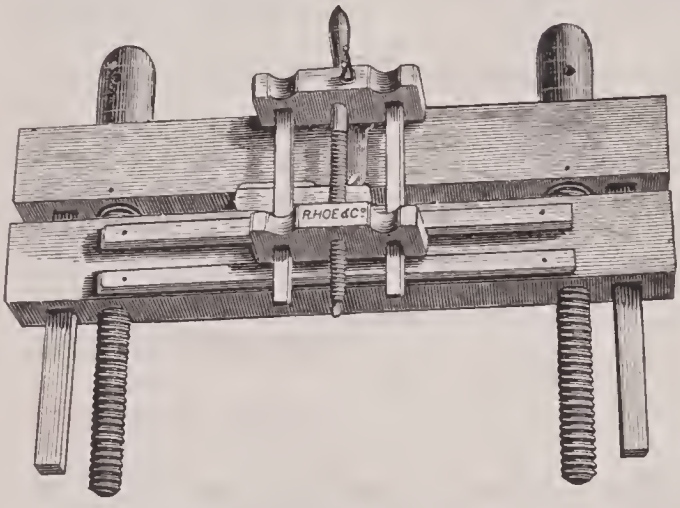
Beating Hammer.

Steel Burnisher.

Bevel Plane.



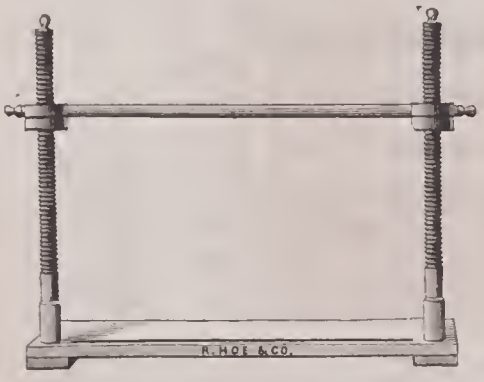
Jointer.



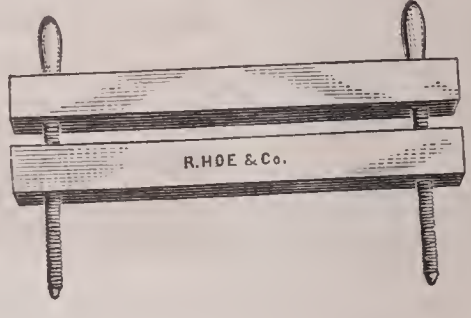
Binders' Press and Plow.

Backing Boards.

Pallet.



Sewing Bench.



Forwarding Press.

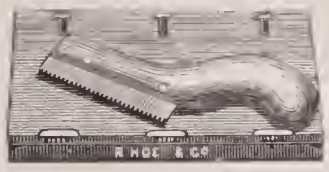
For Prices see page 6.

Composition Kettle.

Plow Knife.

Inking Ball.

Squaring Shears.

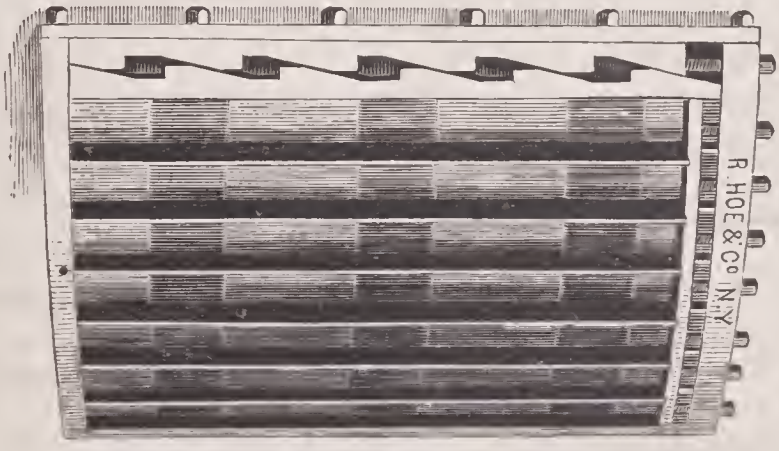


Stereotype Block.

Building Iron.

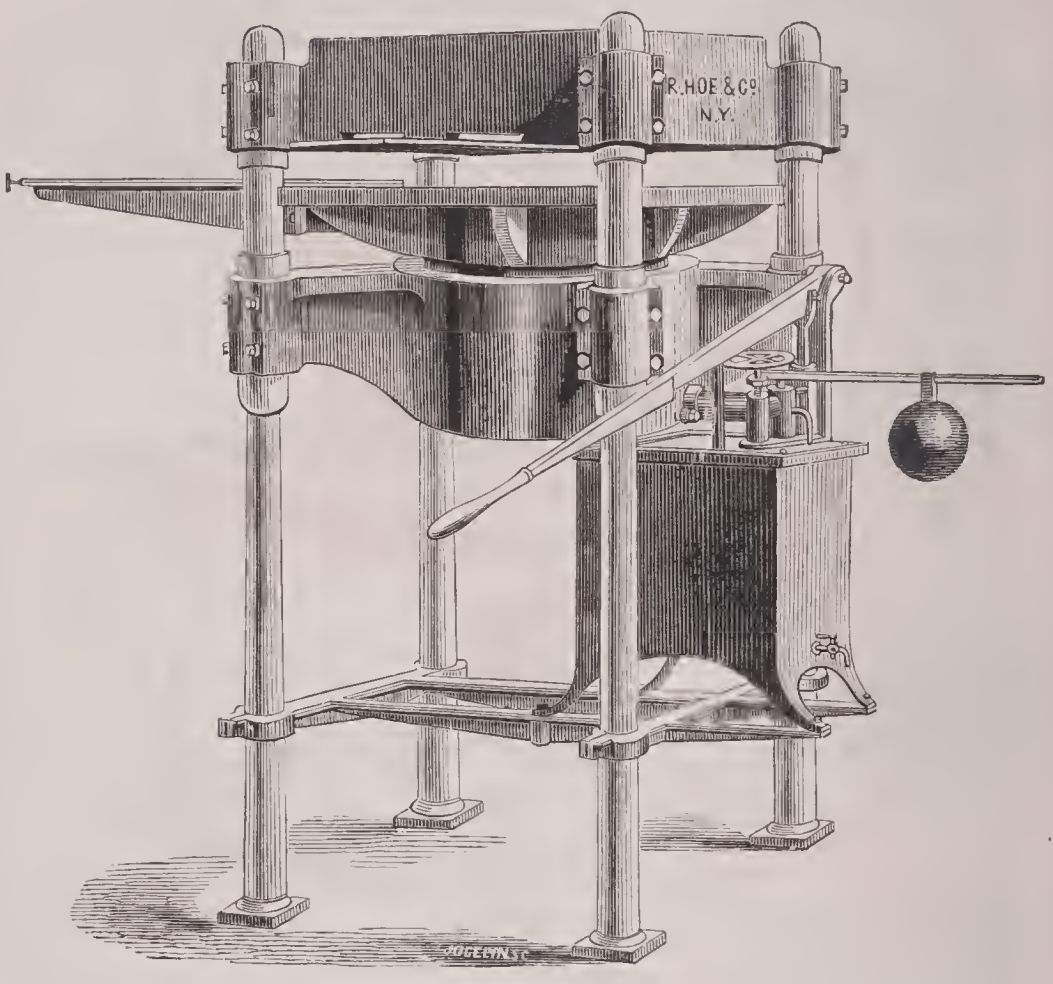
Agate Burnisher.

Agate Burnisher.



Bed (Turtle) of Rotary Printing Machine.

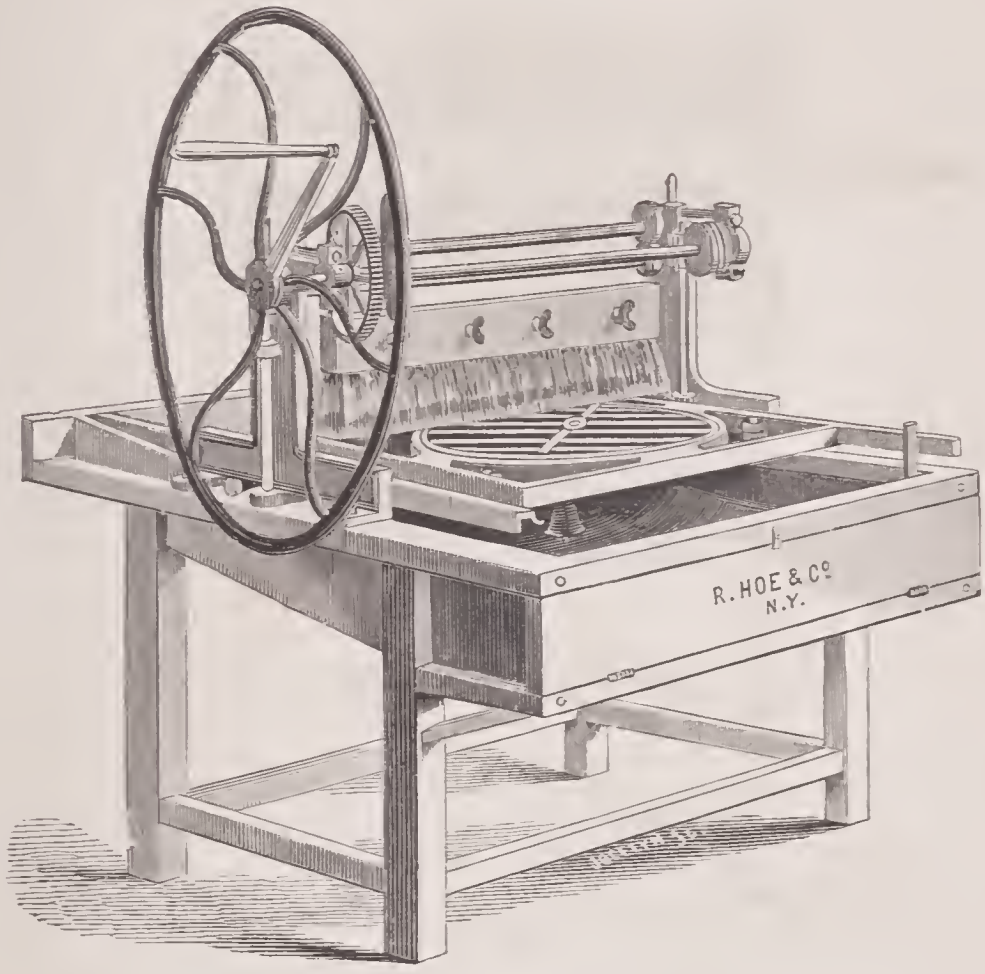
For Prices see pages 3, 4 *and* 6.



R. Hoe & Co's Hydraulic Press for Electrotype Moulds.

THIS press is especially designed for the above purpose, and is very convenient, compact and powerful. The platen is provided with a projecting table, upon which the form and mould are adjusted preparatory to being placed in the press. The pump is placed on the cistern on a frame-work below the cylinder, and has a safety valve graduated to give any required pressure.

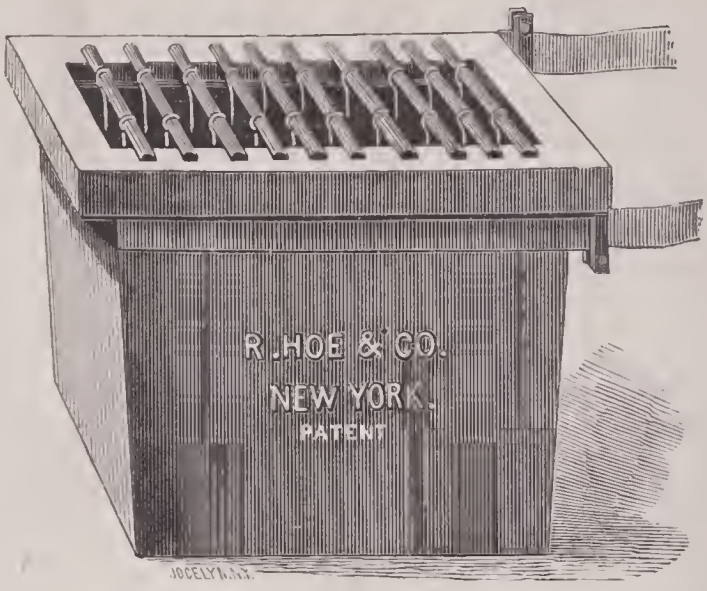
PRICE, $600.



R. Hoe & Co's Blackleading Machine. (Adams' Patent.)

This is a very useful and speedy machine, and performs in a superior manner the otherwise very disagreeable operation of blackleading electrotype wax moulds. The mould is placed on the turn-table of the travelling carriage, in front of the operating brush, under which it is caused to pass slowly backwards and forwards by reversing the motion of the crank. If the moulds are small, several may be placed in the machine at once. A mould 12 inches by 18 inches can be blackleaded in two minutes. An apron under the machine catches the powder and prevents waste.

Price, $275.



Adams' Electrotype Battery.

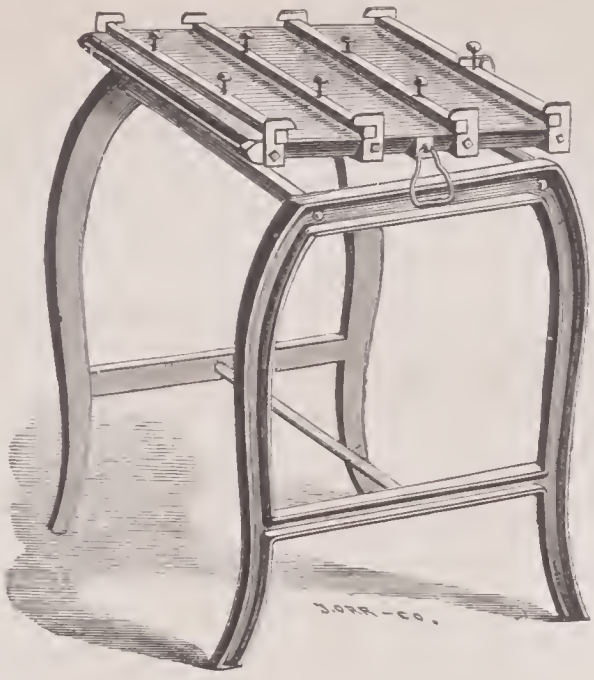
ADAMS' Iron and Potash Battery for the use of Electrotypers, has the following advantages over the common acid Battery:

The zinc is not acted on by the solution until the connection is made—there is no local action—and consequently a saving is effected of at least one-half of the zinc now required to deposit a given amount of copper; and there is also a great saving in the consumption of mercury.

The zincs require cleansing but once a week. The tub and plates being of iron, will not wear out, and the solution will remain good, without change or addition, for from three to six weeks.

PRICES.

No. 1	$150.00
" 2	100.00
" 3	25.00

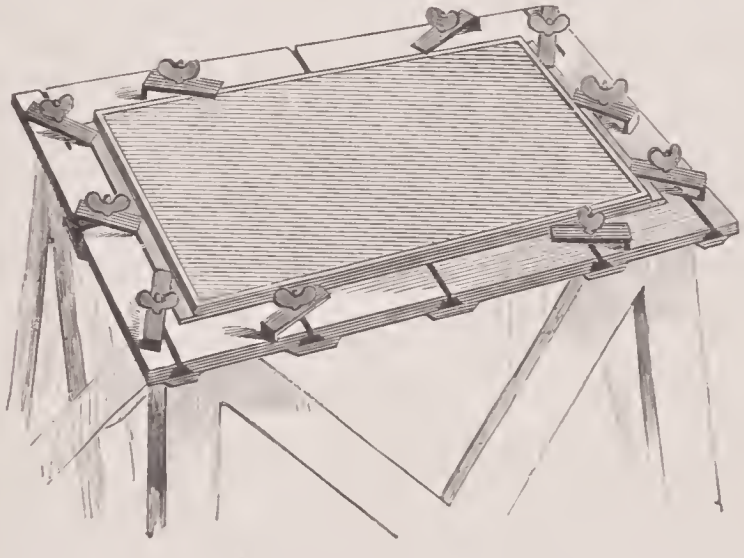


R. Hoe & Co's Backing Pan. (Filmer's Patent.)

THIS Pan for backing electrotype shells, presents the advantages of producing plates with truer printing surfaces than has been done by any other process, and also of a uniform thickness, thus saving much time in the laborious operation of shaving.

PRICE.

Large size	$87.00
Small "	75.00



R. Hoe & Co's Moulding Pan. (Filmer's Patent.)

THE Pan shown above is such as is commonly used by electrotypers for holding the wax upon which the impression is taken. It is made of brass, either from a rolled sheet with the rim riveted on, or cast in one piece.

SIZES AND PRICES.

Size, 20½ × 14½ inches, cast brass	$18.00
Do. " " " rolled brass	14.00

Other sizes in proportion.

Nov. 3 1880.

H 82 81

Deacidified using the Bookkeeper process.
Neutralizing agent: Magnesium Oxide
Treatment Date: September. 2014

PreservationTechnologies
A WORLD LEADER IN COLLECTIONS PRESERVATION
111 Thomson Park Drive
Cranberry Township, PA 16066
(724) 779-2111

MAR 81
N. MANCHESTER,
INDIANA 46962

LIBRARY OF CONGRESS
0 041 633 248 4